

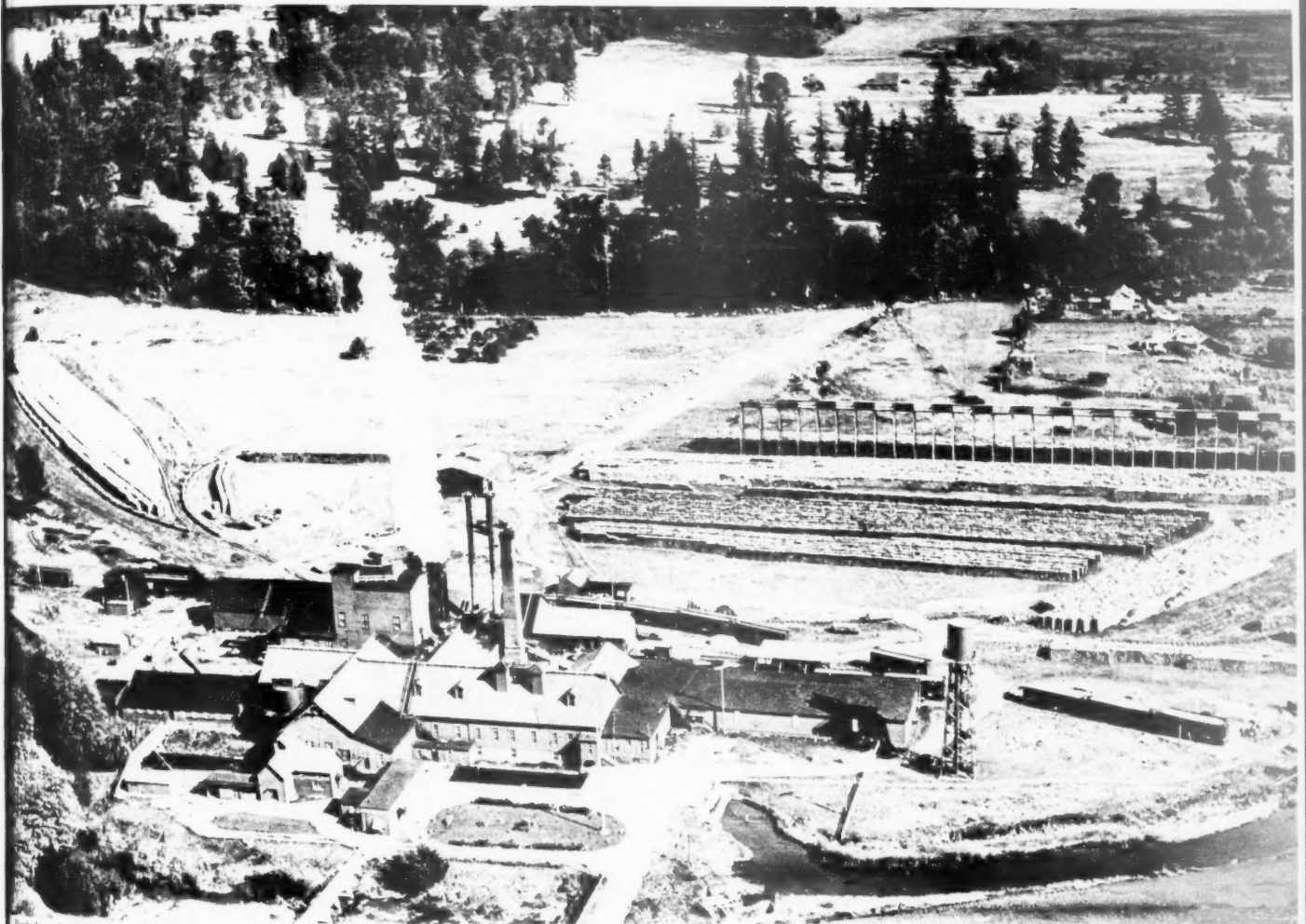
PACIFIC PULP & PAPER INDUSTRY

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MAY 29 1930
U.S. Department of Agriculture

Volume 4
Number 6

MAY, 1930

\$4.00 Per Year
Single Copies, 35 Cents



Bruker Aerial Photo, Portland

LEBANON, OREGON

This mill of the Crown Willamette Paper Company is installing another paper machine.

Liquid CHLORINE



*Ideally Located to
Render Most
Efficient Service.*

The Liquid Chlorine used in bleaching Pacific Coast pulp requires large quantities of common salt for its manufacture. From the San Francisco Bay region, where solar evaporation exceeds the rainfall, comes the salt so essential to the process used by the Tacoma Electrochemical Company.

Constant attention to the quality of the salt together with the care exercised in the manufacturing processes, assures a satisfactory finished product.

Ample stocks of Liquid Chlorine on hand at all times permit immediate deliveries.

TACOMA ELECTROCHEMICAL CO. TACOMA WASHINGTON.

A SUBSIDIARY OF THE PENNSYLVANIA SALT MANUFACTURING CO.

Pacific Pulp & Paper Industry is published once a month—except in March, when publication is semi-monthly—at 71 Columbia St., Seattle, Wash. Subscription: U. S. and Canada, \$4.00; other countries, \$5.00. Entered as second class matter May 20, 1927, at the Postoffice at Seattle, under the Act of March 3, 1879.



The Modern Spiral Bevel Gear Drive

A Smooth, Simple Drive for Changing Speeds, Weights and Draws

THERE is a demand on the part of the papermaker today for a simple drive, adapted to high speeds, where he changes speeds and weights, which in turn changes his draws and helps him to prevent weakening his paper by undue stretch.

This problem has been met by us with a special drive of spiral gears which are encased in a bath of oil. The teeth of the gears are hardened, all rotating parts are supported in anti-friction bearings, everything is quiet. Equipped with a high-speed clutch similar in many respects to the high-speed clutch on your automobile. It is altogether noiseless. There is no place for the oiler or the cleaner, as everything is concealed, and everything runs in a bath of oil. The clutch is operated by hydraulic pressure. A valve on the front of the machine throws it in or out. The belt shifter is operated by a motor from the front of the machine, thus the machine tender can stand with his finger on the button, judging the tension and quietly moving the belt a little slower or a little faster as his judgment may determine. These drive units are also furnished with magnetic clutches.

The large number of recent installations proves the popularity of this type of drive. Write for the facts.

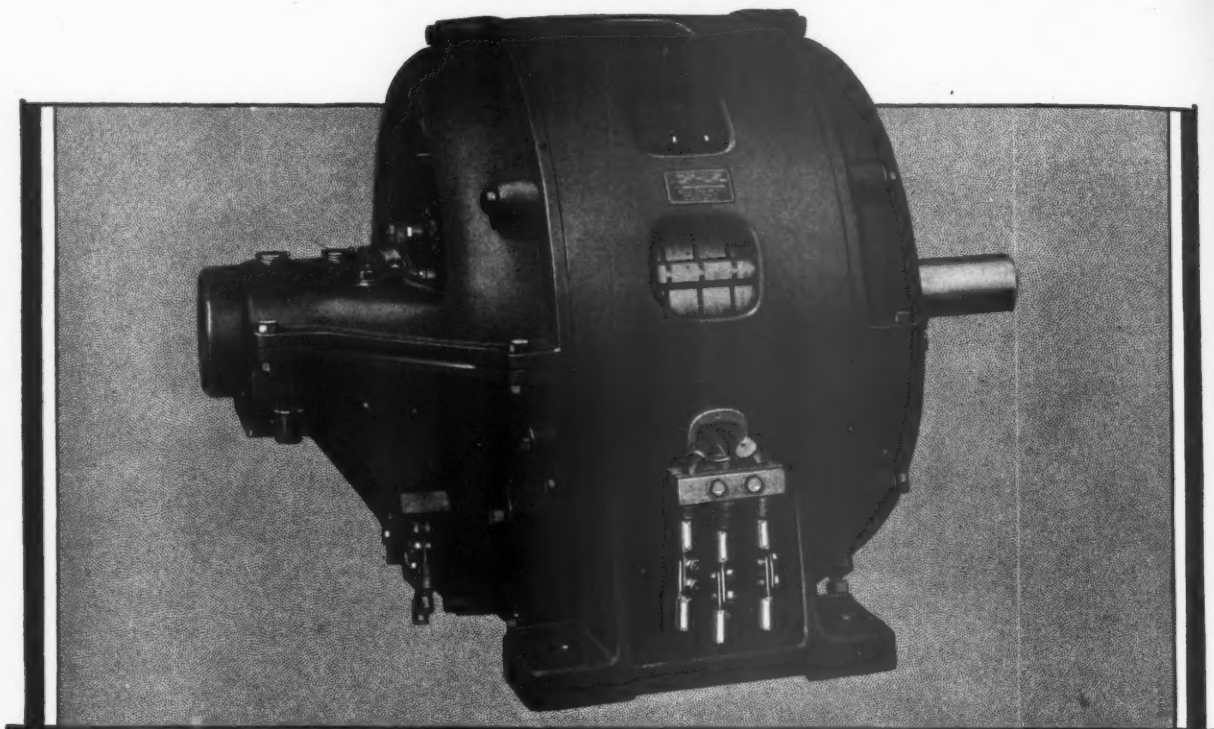
The Beloit Way is the Modern Way

BELOIT IRON WORKS, BELOIT, WIS., U. S. A.

The **BELOIT**



When writing to BELOIT IRON WORKS please mention PACIFIC PULP AND PAPER INDUSTRY



300 h. p., 800 r.p.m., Type ANY
Wound Rotor Induction Motor

Sturdy Motors

— for Heavy Duty Service

Allis-Chalmers induction motors like all of the many products built by this Company are of sturdy construction enabling them to keep going regardless of the severity of the service. It is the extra quality and reserve strength that is built into these motors that keeps plants in production and lowers time needed for motor maintenance.

Rigid box type frames, large and dust proof bearings, and moisture resisting windings are a few of the characteristics of these motors. Another is the adjusting screws for centering the bearing brackets to insure a uni-

form air gap even after years of service.

Allis-Chalmers builds both squirrel cage and wound rotor motors for practically every type of service. Special types are built for unusual service conditions. These include vertical motors, drip-proof motors, steel mill motors, and various enclosed types. The heavier motors are built with pedestal bearings.

Allis-Chalmers electrical equipment includes machinery for the generation, transformation, conversion, and utilization of electric power.

ALLIS-CHALMERS MFG. CO.
MILWAUKEE, WISCONSIN

ALLIS-CHALMERS MOTORS

When writing to ALLIS-CHALMERS MFG. CO. please mention PACIFIC PULP & PAPER INDUSTRY

When 1,000 ft. of News was news!

Jan. 15, 1915

(12,000 sq. ft. a minute)
was the output prepared for a sale
Pine, Barton & Fales Machine then
being tested at a mill in Maine. A
sheet 12 feet wide, at the unprece-
dented speed of 1,000 ft. per minute!

NEWS

BOARD

A New Rice-Barton 124-inch Cylinder Machine

It is the best used in cylinder machine.
It is in operation at a prominent mill in
New Jersey, and makes a product of the highest
quality.
Rice-Barton Cylinder Machines are used for
the most important work in the country.
We have the best and quality work at
your service.

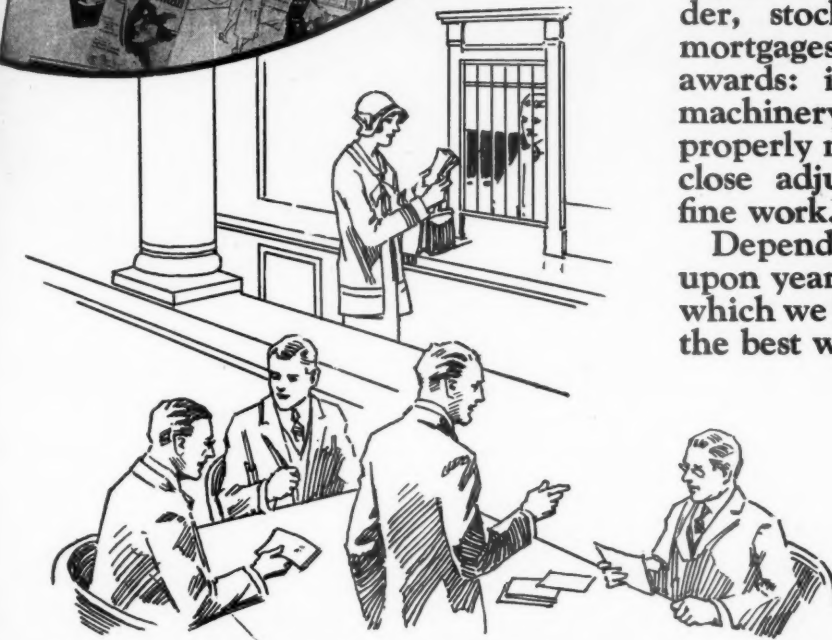
BOOK

UNIFORMITY high quality
with quantity produced
enabled to keep up with the
increasing demand for book-making
product of Rice-Barton
Machines designed and built in
America. They are made up to date
and meet the requirements of the
modern book-making industry.

MONEY

QUALITY paper for legal tender, stock certificates, bonds, mortgages, notes; diplomas and awards: it all comes back to machinery properly designed, properly made—capable of that close adjustment necessary for fine work.

Dependability here is based upon years of experience during which we have eliminated all but the best way.

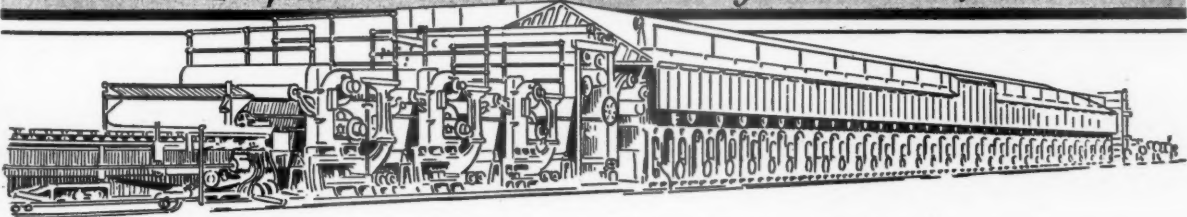


RICE, BARTON & FALES

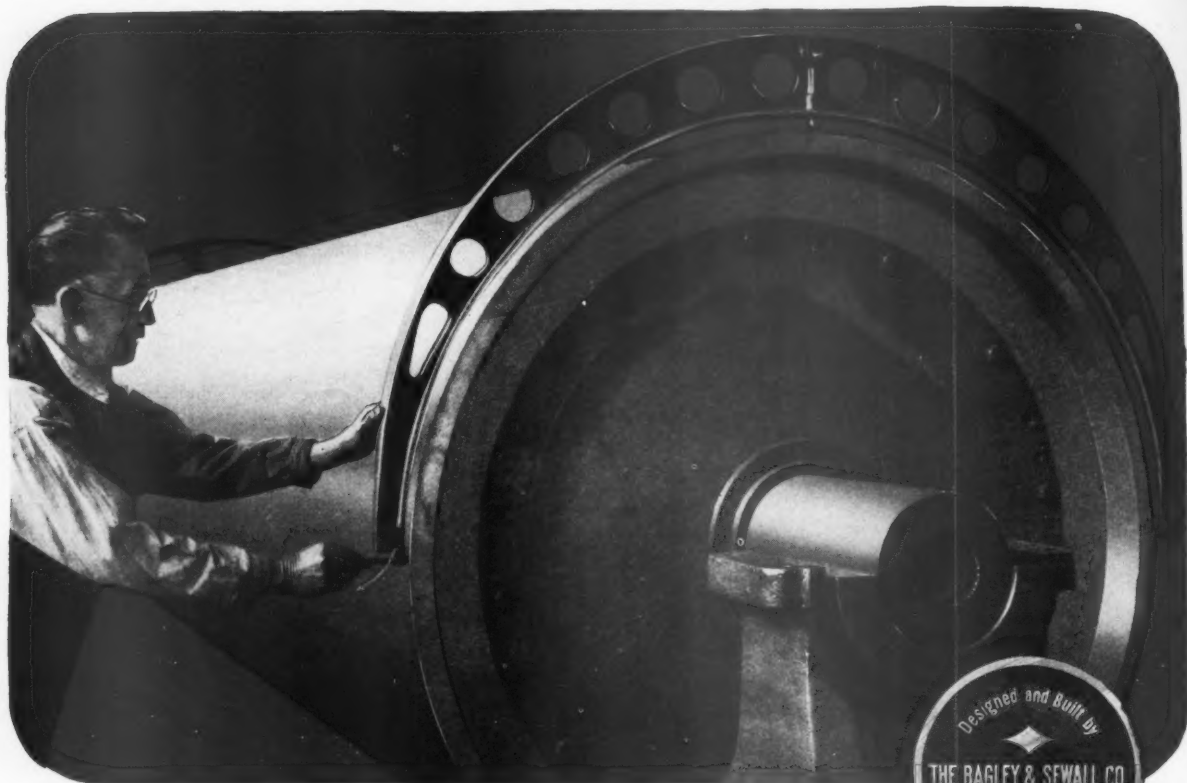
Incorporated

WORCESTER, MASSACHUSETTS

Paper Making Machinery Since 1837



When writing RICE, BARTON & FALES, INC., please mention PACIFIC PULP & PAPER INDUSTRY



Five Feet Across— And True To A Hair

For rolls — from mammoth dryers to table rolls you can grasp in your hand — you can put all your faith in Bagley & Sewall. For here, in a department tooled and manned solely for the production of perfect paper machine rolls, precision, balance and finish are the watchwords. Huge casting pits that hatch thirteen-ton dryers at a single pour; mechanical brains that insure true running balance; specially made monster "mikes" to gauge precision; fussiness about finish, inside as well as out; highest quality in bronze, brass, iron, steel and aluminum; — these are the elements which, combined with over a century of knowing how, enable us to supply the rolls you need when you need them — at prices you're willing to pay.

We'd like to tell you all about them—write us.

***The* Bagley & Sewall Co.**
Watertown, N. Y.

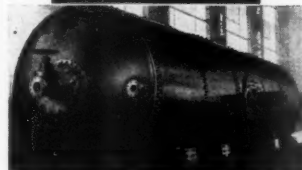
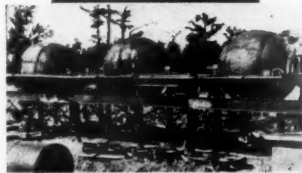
When writing BAGLEY & SEWALL CO., please mention PACIFIC PULP AND PAPER INDUSTRY.



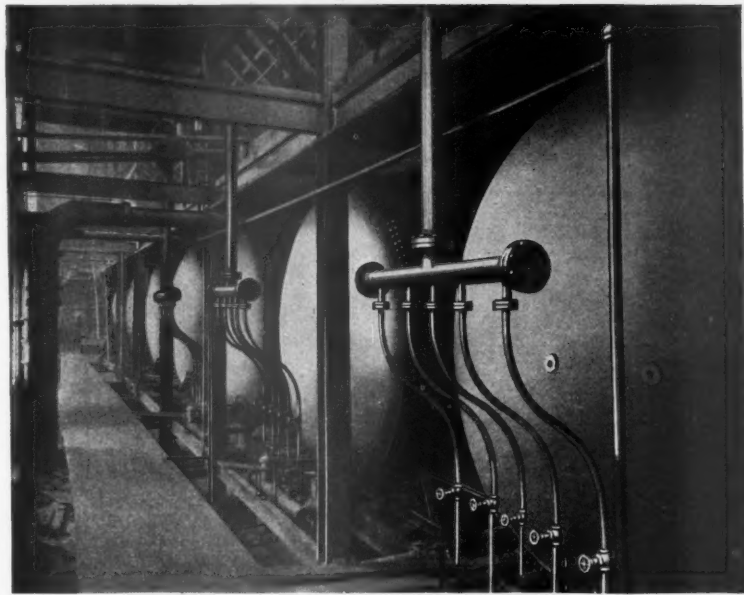
The largest single installation of Sulphite Digesters in recent years, for the Consolidated Water Power and Paper Company, Interlake Division, Appleton, Wis. These nine digesters are 14 feet in diameter, 30 feet long; with shells 11-8" thick, rivets 1-3/8" in diameter; test pressure 135 pounds. Heads, one-piece construction. Time, 120 days. This is one of many interesting illustrations taken from Biggs' newest folder, "Unusual Steel Plate Construction". Mail the coupon for your copy.

"Built by Biggs"

- Welded Globe Rotary Digesters
- Riveted Globe Rotary Digesters
- Cylinder Rotary Bleaching Boilers
- Tumbling Digesters, Welded or Riveted
- Stationary Vertical Digesters, Welded or Riveted
- Penstocks, Pipe Lines, Welded or Riveted
- Welded or Riveted Steel Plate Construction of Every Description



Top—Biggs Welded Rotary Digester.
Second—Biggs Riveted Rotary Digesters.
Third—Biggs Standard Cylinder Rotary Bleaching Boilers.
Bottom—Biggs Tumbling Digester.



"Built by Biggs"—What?

Is it a digester, rotary, stationary or tumbling—cooking or bleaching equipment, welded or riveted—a piece of new equipment that must exactly fit your needs and add to your profit?

It is—and much more . . .

True, Biggs Welded Digesters must eliminate upkeep and deliver permanent, profit-making satisfaction to the user. The Biggs weld is *stronger than the plate itself*. Every product of the Biggs welding procedure must be, and is, approved and accepted by any leading insurance company.

But more than that, every vessel

built by Biggs must become an additional unit in a reputation more than 40 years in the building—a witness to the knowledge, experience, and complete facilities required to fill your needs with speed and accuracy—a messenger that seeks to earn the good will of a manufacturing world not eager to be convinced.

Every bit of steel plate construction *built by Biggs* is fabricated with those objectives in mind. We have always done business that way. We intend to keep on with the same policies, trusting that increasing opportunity will be given to further present client relationships and to build new ones.

The Biggs Boiler Works Company

Buchtel and Case, Akron, Ohio
New York Detroit Chicago



The Biggs Boiler Works Company
Buchtel and Case,
Akron, Ohio.

Send "Unusual Steel Plate Construction"

BIGGS












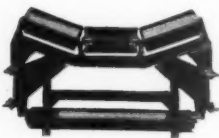

ROTARIES
for years of dependable
cooking and bleaching..



When writing BIGGS BOILER WORKS please mention PACIFIC PULP AND PAPER INDUSTRY

Link-Belt Products from Stock

No Delay . . . No Waiting

 <p>Sprockets You can now get immediate delivery, from our large stocks. Send for Stock Book 918-B.</p>	 <p>Silent Chain Drives Made in all horse-powers. Drives up to 60 H. P. obtainable from stock. Stock Book No. 725.</p>	 <p>Elevator Buckets Bulletin B-17 lists the popular styles and sizes. We make all kinds. Largest stocks.</p>
 <p>Malleable Grease Cups Keep their shape and remain grease-tight. Our >HEX-TOP< is the best grip made.</p>	 <p>Malleable Safety Collars Unsurpassed for resisting wear, rust, shocks and rough usage. Made solid and split.</p>	 <p>Steel Chain, "SS" Class An ideal power transmission where great strength, durability, and long reliable service are expected.</p>
 <p>Ewart Link-Belt The Original Ewart Link-Belt bears this trade mark of quality.</p>	 <p>Friction Clutches Powerful in action. Simply constructed. Easy to operate. Stock delivery. Tell us your needs.</p>	 <p>Elevator Boots To meet every condition. With take-up or fixed bearings. Type shown is very popular.</p>
 <p>Steel "RC" Roller Chain Has remarkable durability, and is an ideal drive for moderately high speed power transmission. Book 257.</p>	 <p>Bucket Elevators All types and sizes for all kinds of material. Let us solve your elevating problems.</p>	 <p>Bearings Solid boxes, angle bearings, pillow blocks, etc., etc. Bearings of all kinds and sizes.</p>
 <p>Speed Reducers For all classes of service. Speed ratios up to 300 to 1. Sturdy, Compact, Efficient, Economical. Book 815.</p>	 <p>Anti-Friction Belt Conveyor Idler Low Power Consumption. Low Upkeep. Easy on Belt. Catalog and Engineering Data Book 615.</p>	 <p>Take-Up Get the best for the purpose. We have many types. "Protected-Screw" Type "DS" shown.</p>

LINK-BELT COMPANY

3882

Equipment for Handling Materials Mechanically and for the Positive Transmission of Power
CHICAGO, 300 West Pershing Road INDIANAPOLIS, 200 South Belmont Avenue PHILADELPHIA, 2045 West Hunting Park Avenue

LINK-BELT COMPANY, PACIFIC DIVISION

SAN FRANCISCO, 19th and Harrison Streets LOS ANGELES, 361-369 South Anderson Street SEATTLE, 820 First Avenue, South
PORTLAND, ORE., 67 Front Street OAKLAND, 526 Third Street

LINK-BELT

When writing LINK-BELT COMPANY please mention PACIFIC PULP & PAPER INDUSTRY



TO provide "economies in paper making" is the essential reason why paper mills in the United States, Canada, and other countries have already installed approximately 600 Oliver United units.

That these "economies" have been provided is indicated by the results and is emphasized by the large number of repeat orders for equipment.

Some Economy Features of Oliver United Paper Mill Units

Save-Alls

90% or better fiber and filler recovery; slow speed; low maintenance; high unit capacity.

Deckers

Maximum capacity per unit of filter area; uniform consistency; maximum fiber retention; permit quick change over in working colored stocks; slow speed; low maintenance.

High Density Thickeners

Give remarkable control of consistency to the bleachers, holding consistency at any desired point—20%, 25% or higher; retain finer fibers; high capacity.

Bleach Washers

Remove last traces of bleach liquor with minimum water; negligible fiber losses; reduce alum requirement; eliminate foaming.

Stock Washers

Practically 100% removal of chemicals with minimum water; reduce evaporation costs; capacity with minimum floor space; greatly reduced labor costs.

Lime-Mud Filters

Compactness; lime, free from chemicals, suitable for reburning; minimum wash water when contrasted with decantation system.

Board Machines

One sheet, no laminations; remarkable smoothness and uniformity; fine fibers retained.

OLIVER UNITED FILTERS INC.



JOHANNESBURG
E. L. Bateman
TOKYO
American Trading Co., Inc.
MELBOURNE
Fyvie and Stewart
HONOLULU
W. A. Ramsay Co.
MANILA
The Edward J. Nell Co.

Factories:
Oakland, Calif., Hasleton, Penna.,
Peterboro, England
Cable Address: OLIVUNIFILT

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HALLE, GERMANY
Wilhelm Lill
SCHEVENINGEN,
HOLLAND
and SOERABAJA, JAVA
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RECIFE, BRAZIL
Ayres and Son

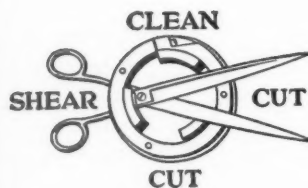
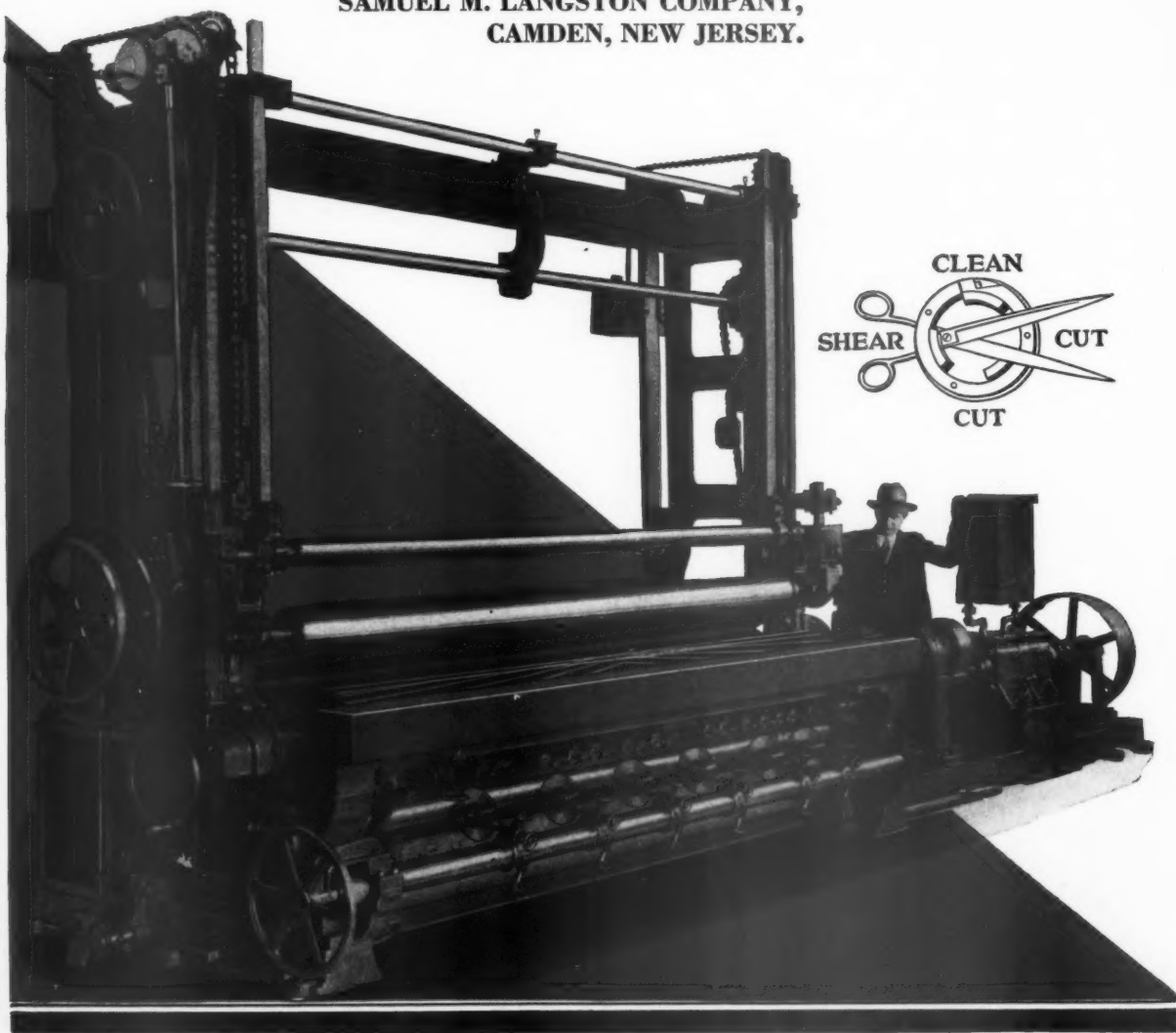
SAN FRANCISCO NEW YORK CHICAGO LONDON
Federal Reserve Bank Building 33 W. 42nd St. 565 Washington Blvd 150 Southampton Row

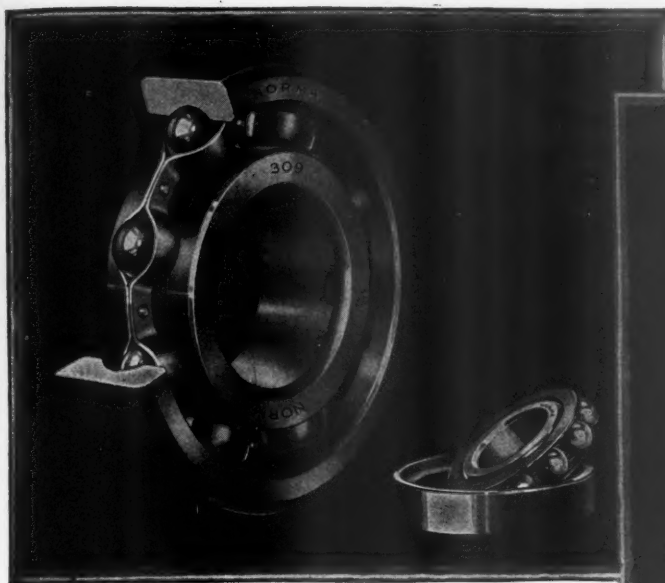
PARIS
T. L. Genter, Concessionnaire
63 Ave. des Champs Elysees

LANGSTON SLITTERS

A type to meet every mill requirement—sizes from 30 inches to 165 inches—and wider. Langston's two-drum winding principle makes rolls of uniform density. And the famous Shear-Cut makes a *clean* cut from start to finish. No uncut fibres—no dust—no hammering the rolls apart. Langston Slitters are noted for low upkeep, high production and excellence of the finished product. A catalog is ready for you—may we send it?

SAMUEL M. LANGSTON COMPANY,
CAMDEN, NEW JERSEY.





NORMA-HOFFMANN Ball and Roller Bearings are available in a complete range of sizes, covering the anti-friction bearing requirements for all speeds and all loads.



INTERCHANGEABLE!

Think what that means!

NORMA-HOFFMANN Ball Bearings have all the load capacity of any ball bearing—PLUS the higher speed-ability and the larger factor of safety which PRECISION standards impart.

NORMA-HOFFMANN Roller Bearings have 50% (or more) greater steady load capacity than even a NORMA-HOFFMANN Ball Bearing of the same dimensions, together with a large overload capacity and an exceptional shock-ability, with a speed-ability equal to that of the PRECISION Ball Bearing.

NORMA-HOFFMANN Roller Bearings interchange in size with NORMA-HOFFMANN Ball Bearings and other standard ball bearings.

Think of the opportunity thus afforded you—by simple replacement without change in dimensions or design—to secure greater speed-ability, load-ability and shock-ability, longer life, better performance.

Our engineers offer their aid. Write for the catalogs.

NORMA-HOFFMANN **PRECISION BEARINGS**

N. B. 1058

SEATTLE:

Ahlberg Bearing Company of California, Inc., 512 East Pike Street.

PORTLAND:

Ahlberg Bearing Company of California, Inc., 409 Burnside Avenue.

SAN FRANCISCO: Irvin Silverberg & Co., 541 Van Ness Avenue.

PACIFIC COAST REPRESENTATIVES

LOS ANGELES:

Joseph A. Masterson & Co., 1822 South Hope Street.

Ahlberg Bearing Company of California, Inc., 1708 S. Grand Avenue.

PHOENIX, ARIZ.: Ahlberg Bearing Company of California, Inc.

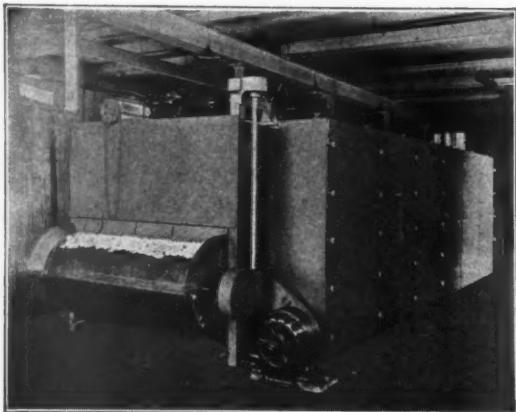
NORMA-HOFFMANN BEARINGS CORPN. - STAMFORD CONN. U.S.A.

FIDALGO DRYING SYSTEMS

(PATENTS GRANTED AND PENDING ALL COUNTRIES)

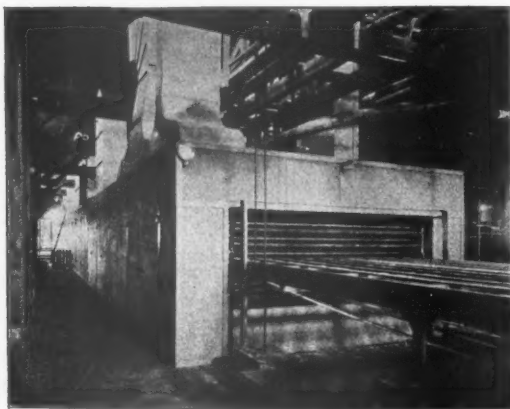
Investigate Our Installations

For PULP DRYING



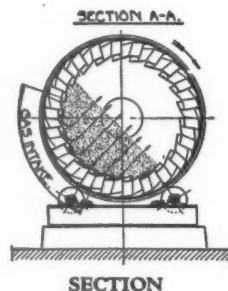
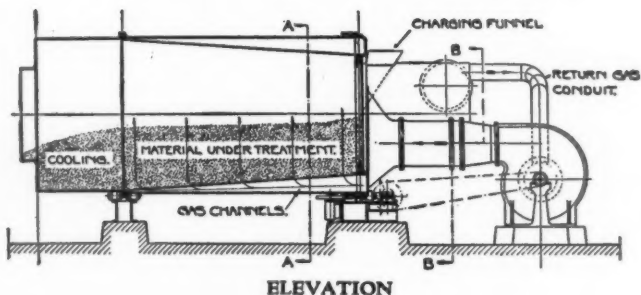
*Shredded Pulp Dried With Same
Strength as Wet*

For INSULATING BOARD



*Type M Dryer—For Uniform Surface
Board—High Speed Maximum
Efficiency*

...for Bark and Chips



The New "PHERSON" Rotary Dryer

Higher Efficiency—Smaller Units—Lower Costs

TECHNICAL ECONOMIST CORPORATION

122 East 42nd Street

NEW YORK, N. Y.

When writing to TECHNICAL ECONOMIST CORP. please mention PACIFIC PULP AND PAPER INDUSTRY



"Let's call the roll"

During the past twelve months these well-known paper makers have installed or ordered the following "Puseyjones" Machines:

242" FOURDRINIER for Albermarle-Chesapeake Co.,
Inc., West Point, Virginia.

226" FOURDRINIER for Frazer Paper Limited, Mad-
awaska, Maine.

226" (2) FOURDRINIERS for Canadian International
Paper Company, Dalhousie, New Brunswick.

222" FOURDRINIER for Mead Straw Pulp Company,
Chillicothe, Ohio.

192" FOURDRINIER for P. H. Glatfelter Company,
Spring Grove, Pennsylvania.

178" CYLINDER for Brown Paper Mill Company,
Inc., Monroe, Louisiana.

178" FOURDRINIER and

160" FOURDRINIER and

156" FOURDRINIER for Union Company, Embrets-
fos Mill, Norway.

Pusey and Jones



THE PUSEY AND JONES CORPORATION, WILMINGTON, DELAWARE, U. S. A., Builders of PAPER MAKING MACHINERY; or NEWS : BOOK :
KRAFT : BOARD : : Working For, and in Technical Co-operation With, the Forward Thinking Minds of the Industry : Since 1848 : The MARK,
shown here, will be found on Every Casting, and on every Other Part of Major Importance, in every Machine produced by This Company : : It is the
Mark of Our Own Technical Standards : : A mark of Superior Quality.

When writing to PUSEY & JONES CORPORATION please mention PACIFIC PULP AND PAPER INDUSTRY



The New Williams Sheet Dryer

Dries Hand Sheets Same as Paper on Big Paper Machine



FEATURES—

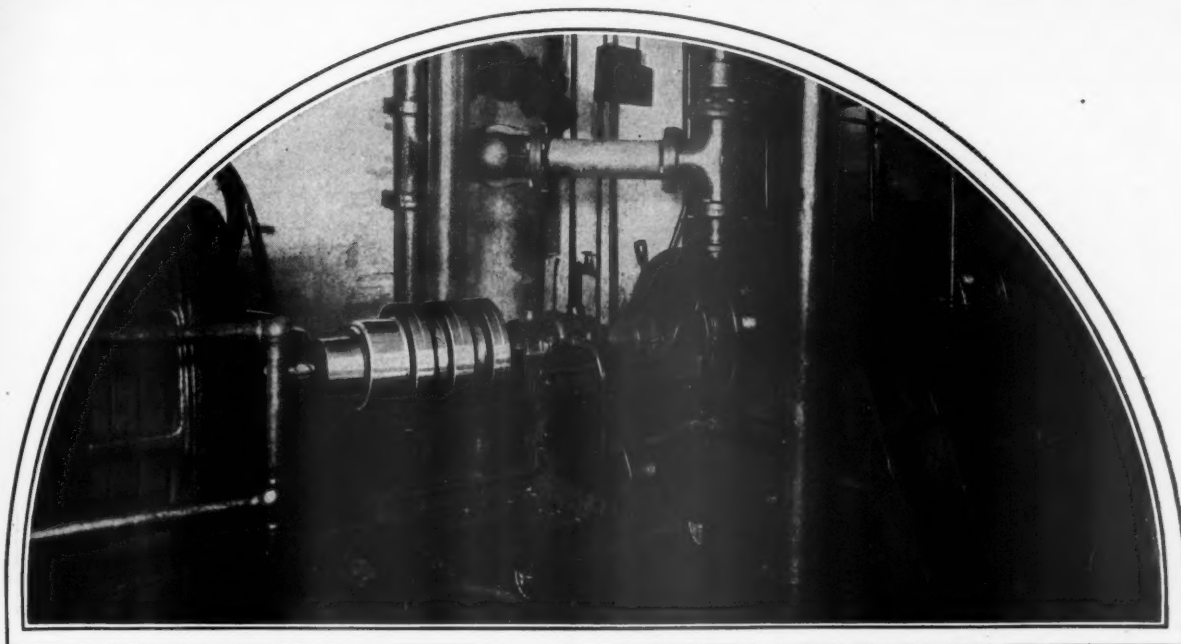
1. *Electric Heat, Thermostat Control.*
2. *Sheet clamped under dryer canvas.*
3. *Drys sheet flat in 4 - 5 minutes.*
4. *Heavy polished copper top.*
5. *Large drying surface, 20x20 inches. Four 8x8-inch sheets may be dried at a time.*

WILLIAMS APPARATUS COMPANY

WATERTOWN, N. Y.



When writing to WILLIAMS APPARATUS Co. please mention PACIFIC PULP AND PAPER INDUSTRY



Fast's Jordan Coupling at Thilmany Pulp and Paper Company, Kaukauna, Wis.

This Jordan Coupling Kills two birds with one stone

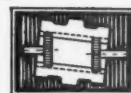
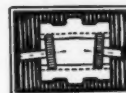
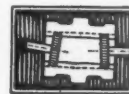
FIRST it provides adjustment of the Jordan plug by a new and simple arrangement—on a 5-inch shaft coupling providing for a full 12 inches of adjustment. It is so built that after the first free travel of over 4 inches, by simply releasing four draw-bolts it can be set twice again for 4 inches each time—giving a total travel of 12 inches—in a 5-inch coupling.

But the greatest advantage is the elimination of coupling repairs by eliminating flexible materials. No lacings, no flexible bushings, pins, springs or other flexible material to be replaced.

See the diagrams opposite. Two spur gears, one on each shaft end, are continuously meshed

with the internal gears of a floating sleeve. The spur gears and sleeve revolve as one unit, misalignment being taken up between the lubricated faces of the gear teeth. Nothing to wear out. Nothing to be replaced. A simple piece of transmission equipment that will last as long as the connected machines.

Do not fail to send for the free pamphlet, "Solving Coupling Problems in Paper Mills", describing various types of Fast's couplings to meet every type of mill coupling problem.



FAST'S

Self-Aligning

COUPLING

When writing the BARTLETT HAWYARD CO., please mention PACIFIC PULP AND PAPER INDUSTRY.

Get Free Pamphlet

The Bartlett Hayward Company
227 Scott Street - Baltimore, Md.

Please send me the free pamphlet on
"Solving Coupling Problems in Paper Mills".



Name _____

Name of Mill _____

Address _____

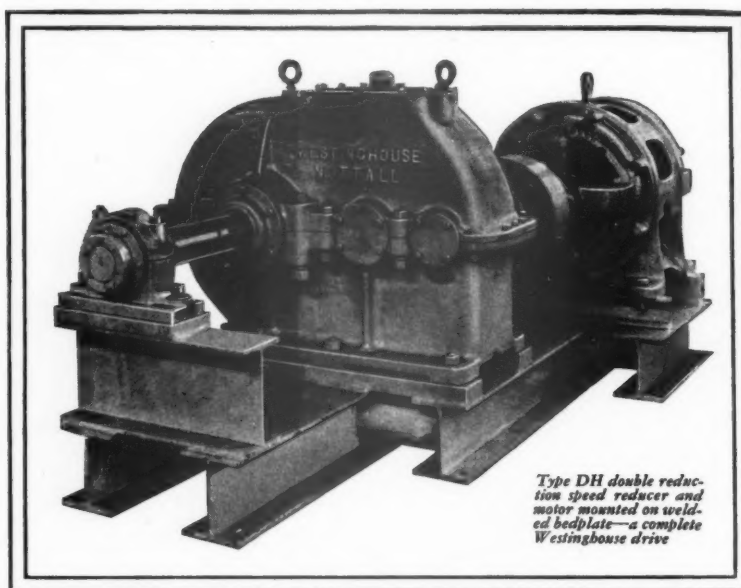
NEW

Westinghouse-Nuttall

SINGLE AND DOUBLE REDUCTION

SPEED REDUCERS

2 types
24 sizes
28 ratios
1 to 635 hp.
capacities



Type DH double reduction speed reducer and motor mounted on welded baseplate—a complete Westinghouse drive

FEATURES

- | | |
|---|--|
| <p>1 Single helical gearing—long and short addendum teeth—made from .40-.50 carbon steel.</p> <p>2 High-speed pinions integral with shafts—made from .40-.50 carbon or alloy forged steel, and heat-treated.</p> <p>3 Anti-friction bearings throughout—two types.</p> <p>4 Shafts for low and intermediate speeds—made from .40-.50 carbon steel—ground fits for bearings and gears.</p> | <p>5 Lubrication by positive splash system—bayonet gauge for checking oil level.</p> <p>6 Cases cast from close-grained gray iron—interiors free from projections and cored openings.</p> <p>7 Efficiency at full load—98 to 99 per cent single reduction units, and 96 to 98 per cent for double reduction units.</p> |
|---|--|

Write our nearest office for Leaflet 29742 containing details, ratings and dimensions.

Service, prompt and efficient, by a coast-to-coast chain of well-equipped shops

Westinghouse



T 31258

TUNE IN THE WESTINGHOUSE SALUTE OVER THE N. B. C. NATION-WIDE NETWORK EVERY TUESDAY EVENING.

When writing WESTINGHOUSE ELECTRIC & MFG. CO., please mention PACIFIC PULP AND PAPER INDUSTRY



GRIEF AND GRAVY

HARDSHIP AND "GRIEF", ALWAYS THE MEAGER FARE OF THE PIONEER, HAVE FACED THE BUILDERS OF THE PACIFIC PULP AND PAPER INDUSTRY. NO TRAIL HAS MARKED THE WAY; THE LEADERS HAVE BEEN GUIDED BY FAITH AND COURAGE ALONE. BUT THE STRUGGLE HAS CLEARED THE WILDERNESS AND FOUNDED A STRONG AND GROWING INDUSTRY, HAS LED THE WAY THROUGH STARVATION YEARS TO SUCCESS AND GRAVY AND PROFITS. THE GROWTH OF THE RECENT PAST AND THE PROMISE OF THE FUTURE ARE A TRIBUTE TO THE WEST.

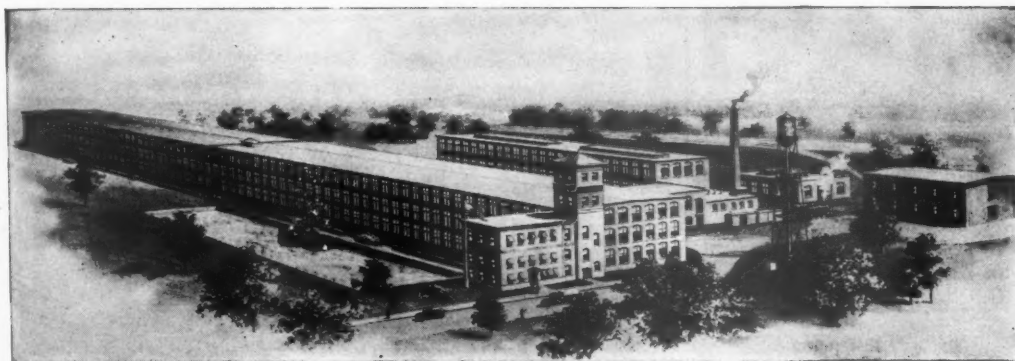
TO THE PIONEER MILLS OF THE COAST GREAT WESTERN SUPPLIED CHLORINE. VITAL THEN AS NOW, THE SUPPLY WAS UNFAILING, THE PRODUCT DEPENDABLE. TO THE GROWING INDUSTRY GREAT WESTERN OWES INCREASING PROSPERITY, AND CONTINUES TO PROVIDE PRODUCT AND SERVICE OF UNFAILING RELIABILITY.



**GREAT WESTERN
ELECTRO-CHEMICAL
COMPANY**

SAN FRANCISCO
PLANT: PITTSBURG, CALIF.
SEATTLE: 514 FOURTH AVENUE

When writing GREAT WESTERN ELECTRO-CHEMICAL Co., please mention PACIFIC PULP & PAPER INDUSTRY.



—THE HOME OF ALBANY FELTS—

Results Command Attention

GOOD BOARD is not made by accident. It is the result of attention to details. One important detail is the felt. Without the proper Top and Bottom Felts the board gets away to a bad start, and is handicapped all the way through to the finished product.

A fast-running board machine of today cannot operate successfully with "any-old-felt." It needs Tops and Bottoms designed to meet its individual requirements. Special wools to give added strength, special weaves to permit ample water removal without interfering with finish. Everything must be *carefully balanced*.

The results modern and progressive board mills are securing from Albany Felts deserve your attention.

ALBANY FELT COMPANY



ALBANY
NEW YORK



At Left—Hood made of Transite for the Standard Paper Manufacturing Co. of Richmond, Va.—note the smooth under side possible with Transite construction which eliminates drip from fasteners and supporting members.

The small photograph below shows the panel construction clearly.



Use everlasting **TRANSITE*** for . . . your paper machine **HOODS**

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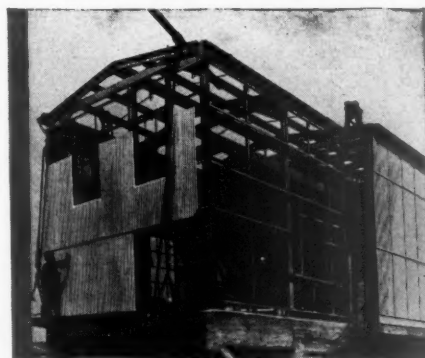
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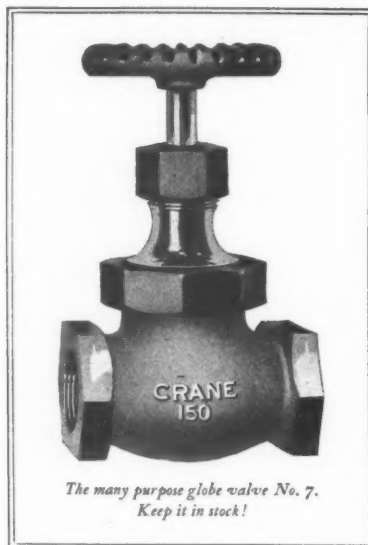
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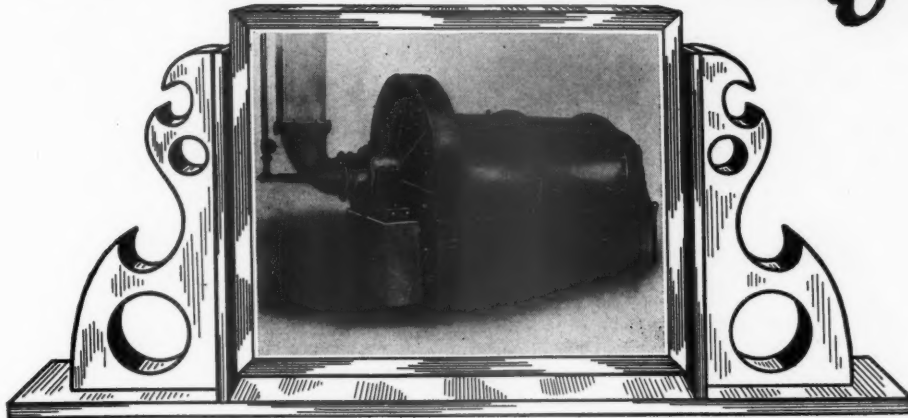
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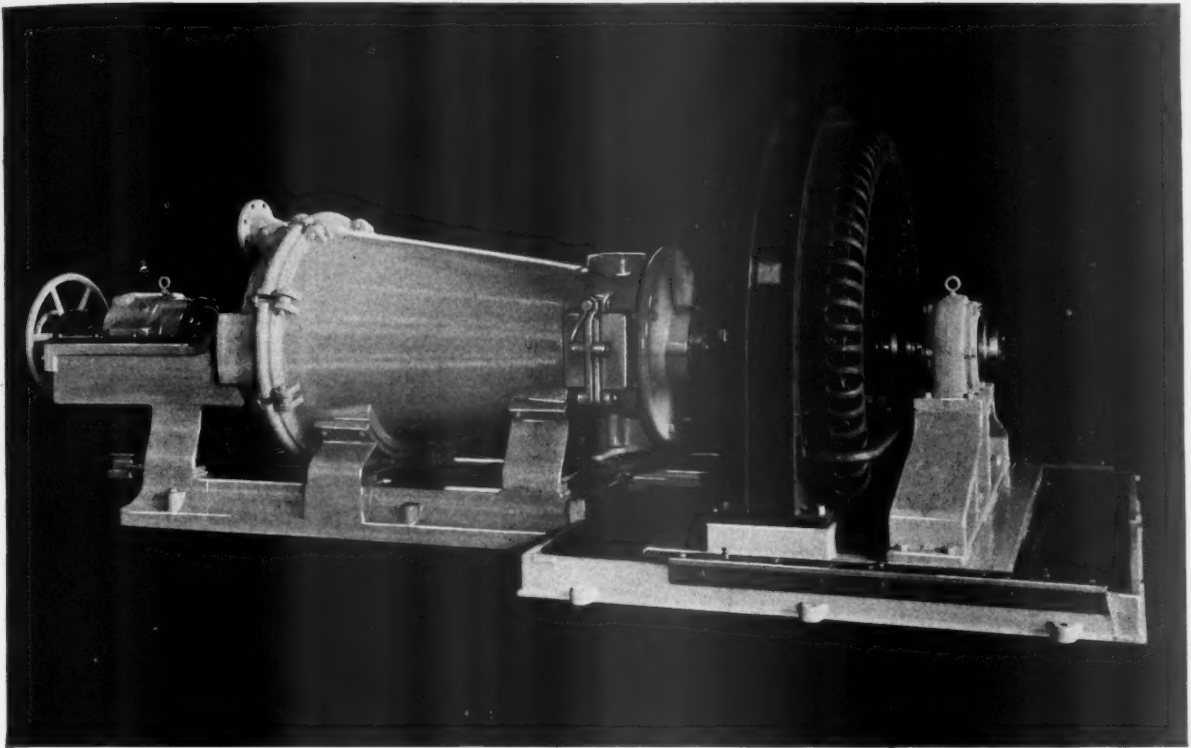
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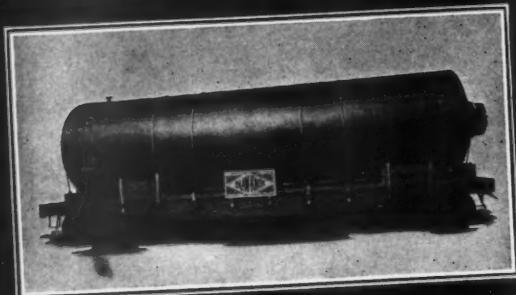
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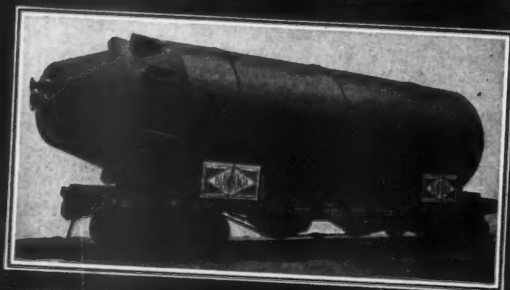
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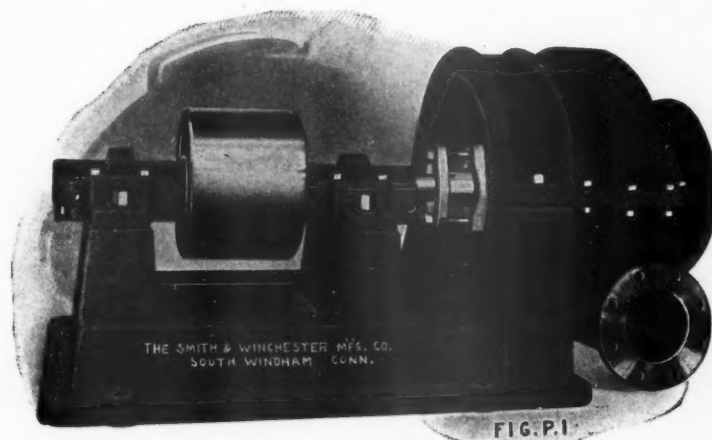
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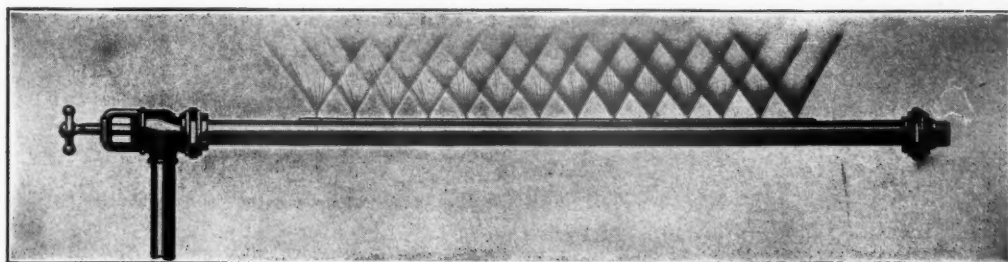
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**THE PACIFIC COAST JOURNAL FOR PRODUCERS, CONVERTERS,
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Grays Harbor Gets Serious

About REFORESTATION

One of the Pacific Coast's richest
timber regions takes the initiative
in perpetuating its wood-using industries.

WHEN the first hardy pioneers pushed their way into the immense virgin stands of timber in the Grays Harbor region of Washington a few decades ago, the problems of production involved little more than hooking the bull team on to the logs. In those early days any one who might be rash enough to predict the time when all the timber would be cut was set down by his fellows for all kinds of things uncomplimentary to intelligence.

But more and more loggers came in, pushed their logging roads up into the hills, rolled trainload after trainload of big fat logs down to the many big-mawed sawmills which sprang up around the Harbor. Today one can see many bare hills about Grays Harbor, some restocking nicely with new growth, some as naked as the day the slash fires went thru.

Around Grays Harbor have developed several thriving communities, the foundation of all of which is wood, wood from the forest which could never be exhausted. Today that point of exhaustion is nothing fanciful. It is a cold hard fact staring Grays Harbor in the face. In the last few years Grays Harbor thought has changed from speculation on "When will the timber give out?" to "What will we do about keeping these forests feeding our wood-using industries?" Grays Harbor has realized that it isn't too late to mend, but that if mending is to be done, it must be done NOW.

Thus we find a group of serious minded men talking it over. There arises the Grays Harbor Forestry Board, the fundamental purpose of which is to keep the wood rolling into Grays Harbor's wood-using industries forever. The action is somewhat unique on the Pacific Coast, where operations have been concerned only with utilizing the natural timber resources as they were found, and not with doing anything about perpetuating the supply. Because the Grays Harbor region has taken this initiative in taking inventory of themselves, their

action is worth serious study on the part of other wood-using communities in the Pacific Northwest. The action marks the awakening of a community consciousness which bids fair to inject a new factor in Coast industries which rely on the forest.

The seventeen recommendations of the Reforestation Committee of the Grays Harbor Forestry Board are presented herewith, but space limitation has made it necessary to abstract the discussions preceding. The report follows:

THE purpose of reforestation endeavor is to bring every acre of land better adapted for growing timber than for any other purpose into producing condition, regardless of the ownership of the land.

Whether held in private, State or Federal ownership, timber from forest lands will be available to sustain the economic life and timber industries of Grays Harbor.

The Grays Harbor district is abundantly blessed by the fact that on the great majority of its lands natural reproduction can be relied upon to re-seed fully and properly such lands when cut over, if the lands are properly handled during logging and if proper consideration is given to fire protection; further, the annual growth under favorable conditions of 1,000 feet B. M. or two cords of pulp wood per acre, may be expected. This is from two to ten times that of other timber producing sections.

Logging Methods

Burning of slash after logging is condemned as detrimental to prompt and full reproduction. The belief is that natural reproduction will follow after present systems of logging if fire is religiously kept out. Where slash has been burned, cut-over areas are not only susceptible to repeat fires, but are delayed three to ten years in restocking.

RECOMMENDATION 1:—That operators be encouraged to plan their cutting areas, so far as possible,

so that there may be a belt of green timber between adjacent operations for as long a period as possible.

RECOMMENDATION 2:—That private owners, County, State, and Federal authorities shall cooperate in all measures necessary to entirely prevent the burning of cut-over lands that have no other value than growing of forest crop, and all laws relating to the compulsory burning of logging slashing should be repealed.

Fire Prevention

Restocked lands must have continued fire protection, and fire prevention activities should be extended to every acre of cut-over land for the dual purpose of perpetuating growth and controlling fires in the hazard seasons. Standing snags are fire-spreaders.

RECOMMENDATION 3:—That all fire fighting agencies treat fires on cut-over lands as destroyers of the reproductive capacity of the forest and as an outstanding danger to standing timber in periods of dry weather: Therefore fire prevention in its fullest extent should be extended to cut-over lands and young growing timber.

RECOMMENDATION 4:—That the various agencies engaged in fire prevention be asked to study the question of legislation providing for fire lanes in cut-over lands.

RECOMMENDATION 5:—That state forest fire service enforce present legislation for the falling of snags and dead trees on cut-over lands.

Reforestation by Private Owners

Confiscatory taxes on growing timber practically prevents private reforestation. The yield tax employed in

many other states and nations is regarded with favor. Attempts to place a forest yield tax on Washington statutes have hitherto failed but at the next election adoption of the following amendment—

"That the Legislature may tax lands devoted to reforestation by either a yield tax or an ad valorem tax at such rate as it may fix or by both"—will pave the way for necessary laws in the state to permit private reforestation."

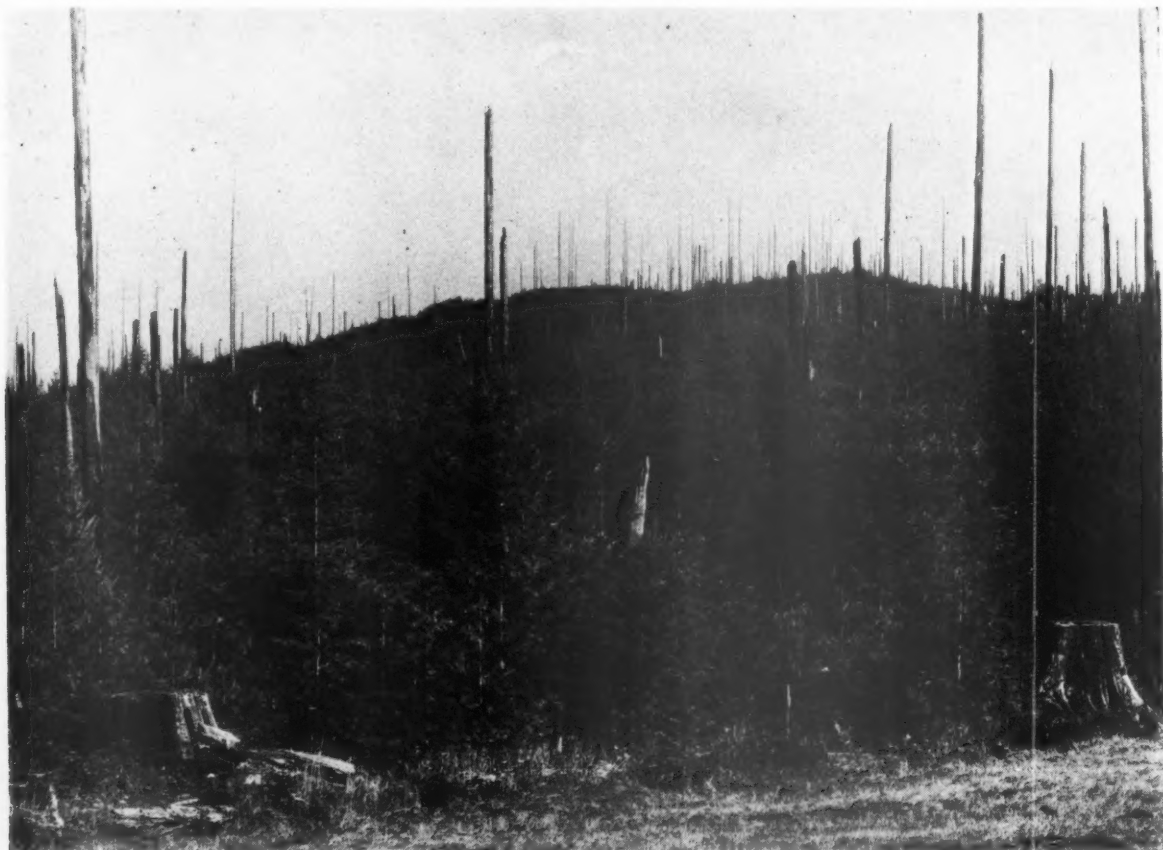
RECOMMENDATION 6:—That the constitutional amendment relating to classification of property for taxation purposes to be submitted at the next election be approved.

RECOMMENDATION 7:—That in the event of the approval by the voters of the constitutional amendment above referred to, the legislature immediately enact a yield tax law similar in its general provisions to the law passed by the Oregon legislature in the session of 1929.

State Timber Lands

The State is in a most advantageous position to engage in reforestation. With its present large ownership of standing timber and cut-over lands, its ability to acquire from counties and private owners additional lands at little or no cost, and with freedom from taxation, the State should be the most important agency in making Washington a continued producer of timber crops.

The State of Washington is the owner of approximately one million acres of timber lands. The forest property of the State has never been appraised, and no



Here is a new forest in Western Washington away to a good seven to ten-year start. It asks only reasonable protection for a few years before it will start contributing its wealth to industry. Note the many snags, spreaders of fire. The better type operations today are felling the snags during the logging.

information regarding the extent of standing timber or its value is available, but certainly it constitutes an enormous resource for the perpetual benefit of our public schools. With only approximately 25% of State lands disposed of to date, approximately 25 million dollars are in the permanent State school funds. It is safe to assume that at the lowest valuation the remaining lands are worth in excess of 100 million dollars.

The solid tracts of State timber already referred to should be sold and managed strictly on a sustained yield basis, since very few of these lands have any other value than for timber growing.

In every county of the State many tracts of cut-over lands have reverted to the counties on account of non-payment of taxes. These lands are receiving no attention whatever, are of no tax benefit to the county, and if left in the present condition will become entirely unproductive. Tax reverted lands should be placed under the jurisdiction of the State forest service, and those suitable for timber growing be managed accordingly, and the counties re-imburshed from a percentage of the returns from such lands when future sales are made.

Under a law of 1923 the State was authorized to consolidate present state lands, to acquire by purchase or gift additional cutover lands, and to form state forests with more or less continuous ownership, and to manage the same as State Forests under a State Forestry Board. In the first few years of this law three state forests, aggregating over 63,000 acres, were consolidated and acquired.

During the past five years, owing to executive disapproval, the State Forestry Board has been inactive, and no further steps have been taken to carry out the provisions of the law.

The State of Washington should immediately organize a State forest nursery and begin, on a conservative scale, the planting of those areas of State lands which need replanting.

RECOMMENDATION 8:—That the lands owned by the state, aside from scattered sections, be not sold until legislation is provided for their sale and management on a sustained yield basis.

RECOMMENDATION 9:—That the legislature appropriate necessary moneys for the survey and appraisal of all state timber lands in order to ascertain the amount of timber held by the state and to classify the lands as to future use.

RECOMMENDATION 10:—That the provisions of the law of 1923 providing for the consolidation of state lands and the purchase of cut-over lands to form state forests be carried out, and the state of Washington acquire as soon as possible, in advantageous locations, as large an area as possible of lands suitable for state forests, provided that counties within which such areas are included shall receive from the state an adequate portion of the net forest sale.

RECOMMENDATION 11:—That legislation be provided so that lands reverted to the counties for unpaid taxes may be turned over to the state forestry department for management, protection and operation under the forestry laws, and that provision be made for recompensing the counties with a percentage of the net proceeds of sales from such lands.

RECOMMENDATION 12:—That the legislature provide funds for the establishment of state forest nurseries and that the state proceed in a conservative way to the planting of state cut-over lands where most desirable.

Federal Lands

Altho approximately 22% of the State of Washing-

ton is held by the Federal government as National Forest, the results of Federal management are disappointing. Comprised within the National Forest are large areas which have not been properly restocked. The country has a right to expect that the Federal Forest Service shall be a leader and an example in forest work and that the wealth of the nation justifies placing in productive condition, as soon as possible, every acre of Federal lands not properly restocked. The Forest Service is roundly criticised for spending too much on overhead and not enough in actual fire protection and reproduction.

The productivity of the forest is no greater than when the forests were created. National Forest cut-over lands are in no better condition than private denuded lands. It is time the Forest Service realized that its chief function is to promote timber growing.

RECOMMENDATION 13:—That in the sale and management of National Forests the principle of sustained yield should be religiously maintained, and that the application of the sustained yield principle should be not only applied to the forests as a whole but to areas naturally tributary to the forest consuming centers adjacent to the forest.

RECOMMENDATION 14:—That timber sales from National Forests be gauged so far as possible in view of the necessities of present operating concerns to bridge the gap following the depletion of privately owned timber lands.

RECOMMENDATION 15:—That in anticipation of vastly increased hazard to National Forests due to increased cutting on its boundaries and inside the forest, additional appropriation be made and a larger forest fire personnel be developed.

RECOMMENDATION 16:—That the National Forest Service at once outline a comprehensive program of replanting all areas in the National Forest not properly stocked with timber and suitable for timber growing, and that Congress be asked to provide that returns from National Forests, less such amounts as are allocated to the states and counties, shall be placed in a forest planting fund available for carrying out the National Forest planting program.

Protection for Forest Products

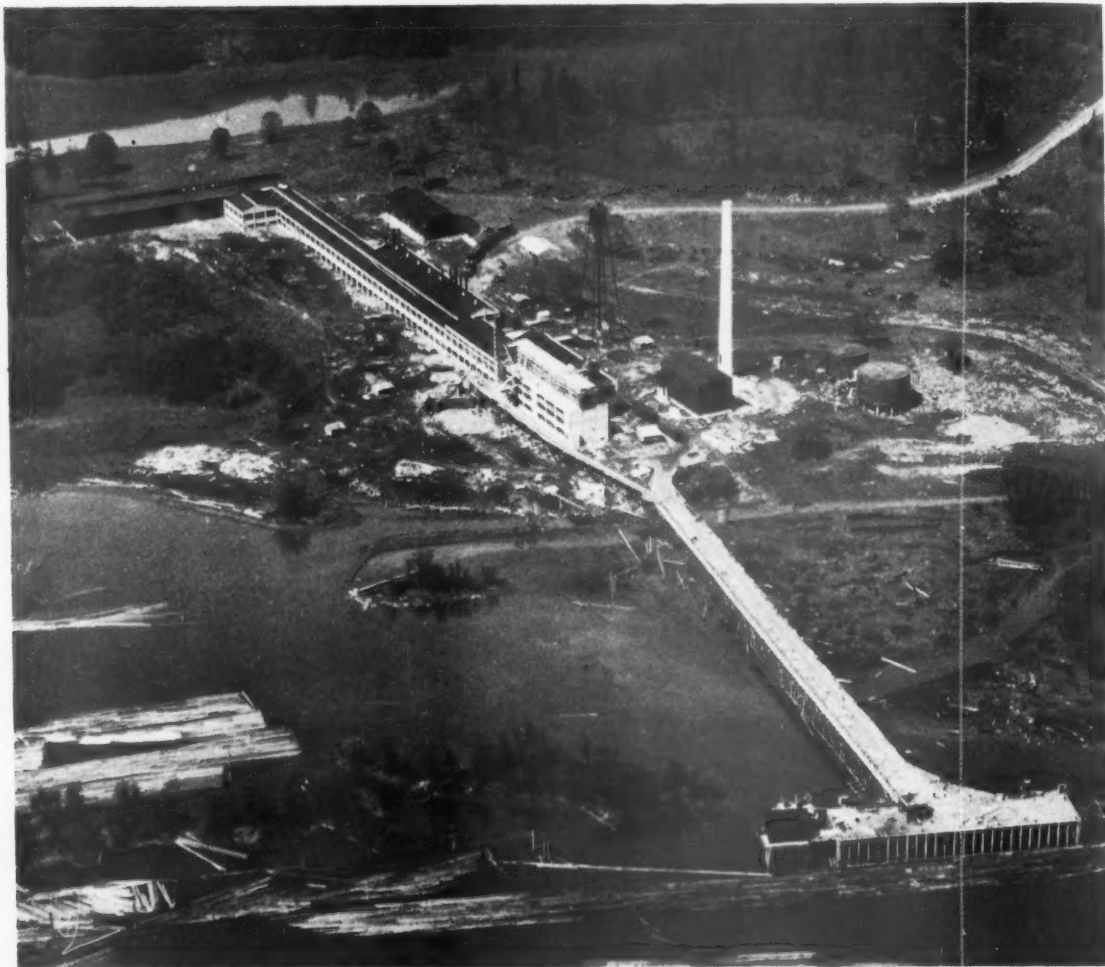
The growing of forest crops is a business, and the extent to which private capital goes into it will depend on returns and profits. There is likewise no reason why the nation or the state should engage in forestry on any different principles. If timber and forests are necessary in the industrial life of the nation, the consumer will have to pay the cost of production or seek substitutes in other materials.

RECOMMENDATION 17:—A moderate protective tariff is vital to the progress of American Forestry. We urge the Congress to enact a tariff applying to all competitive forest products including lumber, shingles, pulp wood, wood pulp and paper.

The report was submitted by the following Committee on Reforestation: Frank H. Lamb, Chairman, Charles Albertson, W. C. Mumaw, Phil S. Locke, and J. E. Calder.

Another Pulp Timber Cruise in Alaska

Forest Examiner J. P. Williams and assistants have started a 1930 cruise of pulp timber on the east side of Admiralty Island in Southeastern Alaska. The cruise will occupy most of the season. The rangers will use a floating camp, working first from Eliza Harbor.



Brubaker Aerial Surveys, Portland

This view of the Fir-Tex Insulating Board Company's new plant at St. Helens, Oregon, was taken late in April.

Fir-Tex Plant Soon Ready

Down at St. Helens, Oregon, on the Columbia River, where the Fir-Tex Insulating Board Co. is pioneering in the Pacific Coast area with the building of a new \$2,500,000 woodfibre insulating board plant, the prospects are excellent that the company will complete its big building program on schedule and turn over not later than July 1.

The stage of construction can better be determined by referring to the aerial view published in connection with this story. The view was taken the last week in April.

The completed Fir-Tex plant will have an initial capacity of 250,000 square feet of insulating board per day. It will effect a greater degree of wood utilization than any other plant on the Coast, it is believed. Its raw material will be all waste wood, bark and all. The wood will be supplied by sawmills of the McCormick Lumber Company and others. In terms of tonnage the plant will produce about 80 tons of finished product, or about 4 carloads daily.

On May 1 the last of the concrete work was being completed. The buildings are concrete and steel and of first class construction thruout, the effort being to provide buildings which are first class in every respect without being overbuilt. Glaziers were setting the glass

in the steel sash. The six rotary Biggs boilers in which the wood will be semi-digested were in place, all assembled and riveting progressing rapidly. The several shredders were already installed.

The insulating board is to be formed on a Beloit four-drinier and the installation of this principal piece of equipment was largely completed the first of May. The Beloit machine will form a finished sheet 144 inches wide. It will incorporate a number of new features.

The 8-deck Coe dryer in which the board is to be dried was practically completed and was being given its preliminary turning over. The dry boilers which are to provide drying heat were rapidly nearing completion.

Adjacent to the main buildings the boiler house was being completed. The stack is completed and the boilers are being set up. Contrary to usual practice the Fir-Tex plant will fire oil for its steam and heat requirements and will generate no power of its own. All of the wood it receives will go into its finished product and none will go under the boilers.

The quarter-mile-long dock extending out from the main plant has been completed and equipped with a rubber belt conveyor to unload the chips from scows.

Construction of the Fir-Tex plant has been so designed that the installation of a second, and even third and fourth unit, can be made with few changes and no interruptions to operations.

GRINDING TEMPERATURES

"Let us admit it is an old and much maligned subject"

By FRED R. SIEVERS

Superintendent Sidney Roofing & Paper Co., Ltd.



BEFORE embarking upon a discussion of grinding temperatures, or the proper temperature at which wood should be ground to produce mechanical pulp, let us admit it is an old and much maligned subject. Comparisons are made between different mills, with nothing but the bare figures showing the numerical degrees of temperature, with no thought or consideration

of how this temperature was attained.

When freeness and strength tests were unknown, outside of laboratory experiments, the general rules adhered to by most pulp and paper makers were that a cold ground pulp had a superior finish, and that the strength of hot ground pulp surpassed that of the cold ground pulp. This theory was evolved before mixing tanks came into use, when all pulp had to pass through the beaters en route to the paper-making machine.

In substance, under conditions of stone sharpening then practised, these theories were partially correct. Stones were formerly dressed with coarser burrs than are in use today. A sharp stone, when heated rapidly, dulls more quickly than if kept cool. The dull stone would probably give, under normal conditions, a slower stock than it would were it kept sharp and cool. Slow stock is the fundamental requirement of news furnish today and whether ground hot or cold, it must have this required degree of freeness to attain either strength or finish.

Many different things affect the temperature of the pulp as it comes from the grinding pit, and altho some are of minor importance, it is imperative to take each into consideration when making a comparative test of temperatures of one stone with another, or in checking up grinding temperatures as related to practice in other mills. No discussion on stone temperature would be entirely complete without touching upon a few of the things that are found in the make-up of grinding temperatures, namely: the moisture content of the wood, the kind of burr used, the nature of dressing (whether light or hard), the depth, length and general conditions of the stone pit, the texture of the stone, the atmospheric temperature, and probably the greatest factor of all, the amount and temperature of the shower water used upon the stone.

Moisture Content of Wood

It can be seen readily that in grinding a comparatively dry wood, more heat would be generated than in the grinding of wood from water-soaked logs. The water carried by the jig impressions on the stone acts as a lubricant between wood and stone and if the wood

is dry, there is for lubrication only the water from the stone shower furnished at the point of contact of stone and wood; whereas, if the wood were water-soaked, there would be additional lubrication furnished to the stone from the water forced out of the wood by the pressure applied to it in the process of grinding.

Thus, more heat is generated when grinding dry wood than when wet wood is ground. Dry wood is likewise a poorer conductor of heat than is wet wood and, therefore, will not carry it away from the stone as readily as the wet wood.

The Burr and the Dressing

The kind of burr used and the manner in which it is applied can have a distinct bearing upon the temperature of grinding. A stone jigged hard with a coarse burr will run noticeably cooler, all other things being equal, than will a stone jigged in the same manner with a fine burr. (Burs up to 8-cut are considered coarse—from there on, fine.) This is due to the fact that the impressions left by the coarse burr will carry more water to the point of stone and water contact than will the fine burr. Also with the use of a coarse burr, the process assumes more of a cutting action, producing fibres so large that they will not take up water readily, and in this way leave more water free for lubricating the stone.

With the use of a fine burr the process is one of grinding; the fibres are drawn from the wood rather than cut. They are fine and badly bruised in a state where they will absorb water freely, leaving less for lubrication purposes, and in this way producing greater heat.

It follows also that a stone given a light dressing with a coarse burr will heat up more than if given a heavy dressing, and like results can be gained with the use of a fine burr.

Lumps or high spots, grooves known as creases, formed by improper dressing of stones, will also give high grinding temperatures.

Texture of the Stone

A soft, open, coarse stone, one in which the binder will dissolve, leaving it porous, the sharp grit exposed during the process of grinding, will run much cooler than a hard, fine-grained stone. This is due to the same fact as mentioned with the use of coarse and fine burrs; the coarse stone will carry more water than will the hard, fine stone, keeping its cutting surface better lubricated.

Atmospheric Temperature

In mills grinding all the year round, it has been noted that summer grinding temperatures range from 10 to 20 degrees F. higher than winter temperatures. This,

of course, is easily understood; the air warmed in summer will not absorb as much heat as it will in the cold winter months.

The Stone Pit

A difference in the size of stone pits will affect grinding temperatures. Stones run hotter in short, shallow stone pits than in stone pits made deep and with ample length. This, of course, will only apply providing all other factors are the same. With a stone pit of proper proportions, the stone will keep cleaner; the consistency can be better regulated; more even grinding temperatures are maintained because the stone is kept well immersed at all times in a bath of stock and water.

With a stone pit short and shallow, the temperatures fluctuate rapidly. The fast rotation of the stone may even throw so much stock and water from the pit that it will constantly burn. Stone pits that are allowed to become clogged with slabs, slivers, etc., will give high temperatures to the grinding operations. Stones will burn and become glazed, causing unnecessary jiggling and loss of production.

Shower Water

In grinding temperatures shower water is the one and most important factor to be considered. If you wish to heat up a grinder, the shower water is reduced; if you wish to cool it down, the shower water is increased. Consistency is regulated by the amount of shower. Temperature of the grinding pit is closely related to the temperature of the shower water.

Taking figures from the table attached to this article, showing the relation of grinder pit temperatures, and consistency to the temperatures of the shower water, we find that a stone using white water shower at 78 degrees F. will rise to a temperature of 176 degrees and will attain a consistency of only 6.04%, as compared with a stone using fresh water shower at 42 degrees temperature, with a pit temperature of 173 degrees and a consistency of 8.62%.

Of course, consistency of the stock in its relation to the temperature is always affected by the aforementioned things in this article, but we have found that if good, even stock is required, a normal consistency must be maintained, say between 4% and 6%. Up to 6% consistency the pulp coming from the stone looks wet and flows freely over the backing boards of the pit. Above 6% the stock coming from the stone pit begins to take on a dry appearance, and when a point somewhere between 8% and 10% is reached, the stone will usually begin to burn.

The reason is that stock and water have become so much a part of each other in solution that the stone can no longer pick up a sufficient amount of water on its face to lubricate the surface at the point of contact with the wood which is being ground. If you were to dip a dry stick quickly into a hot mess of pulp which was of, say 9% consistency, upon drawing it out you would find that very little or no water would adhere to it, the stick being nearly dry. If the stick were to be dipped into a pulp of low consistency, upon drawing it out you would find drops of water dripping from it.

This is the manner in which the stone gathers its water for lubrication, by dipping water upon its face from the pulp in the stone pit as it rotates thru the stock at a rate of from 200 to 250 r.p.m.—a peripheral speed of from 3200 to 4000 per minute. Running in stock of a high consistency the stone becomes dry and heats up from lack of lubrication. The cavities in the cutting face become filled with powdered wood. The stone becomes

glazed and begins to burn. But before a stone running at a high consistency burns, many things happen to the pulp being produced. If the stone is at all sharp, it will begin to tear. Large slivers will show in the stock and the freeness will rise.

Upon placing the pulp from such a stone on a blue glass small bundles of fibres will show up that no amount of stirring will separate. These bundles of fibres are a worse evil in high consistency grinding than are the slivers. The bundles that are too large to pass through the screens will be carried into the tailings, thus placing an excess load on your refiners. If refiners are not used, the loss is in the form of waste. The small bundles of stock that will pass the screens, will be carried to the paper machines, where they will enter into the sheet in the form of small balls. They retard the formation of the sheet and, if enough are present, will show up in a sheet of paper in much the same way as does poorly beaten broke.

The writer has gone into the pulp mills when the tailing screens were flooded, the refiners were overworked and sliver tanks ready to overflow, and by increasing the showers on the stones running at high consistencies, has cut down the amount of stock going to the tailing screens and refiners by half. The duller the stones the lower will be the consistency at which the pulp will ball. A freeness test will rarely show this condition. A blue glass is a more practical instrument for detecting this fault.

As regards strength of the news sheet gained by excessive temperature in grinding, no laboratory experiment to my knowledge substantiates the claim. Taking figures from table No. 3 attached to this article, it will be seen that stock ground from spruce wood at 156 degrees F. with a freeness of 39 c.c. and a consistency of 5.51%, tested 51.1% per gram on the Mullen tester as compared to a stock made at 193 degrees F. with a consistency of 5.66% and a freeness of 21 c.c. which gave a pop test of 53.99% per gram. At first glance the outstanding figure is the temperature, the consistencies are about the same. But on looking further we see that the great difference is in the freeness and this is one fact that has been proven time and time again—a low freeness gives a higher pop test.

A few years ago it was my privilege to visit a number of Eastern mills. In each mill visited that manufactured mechanical pulp a grinding temperature as high as could consistently be maintained under individual conditions was used. The temperatures ranged from 135 to 170 degrees in the various mills. With magazine grinders the temperature was not so high, usually around 145 degrees F., not because the operators believed that they were deriving a benefit from this temperature, but because magazine grinders are so constructed that they present less operating difficulties at low temperatures.

Temperature and Color

Grinding temperatures have a certain effect on the color of the pulp ground. Pulp ground hot, if of a low freeness, is considerably whiter than if ground cold. The explanation is largely theoretical. It may be that more incrustating material of the wood is oxidized by the heat. Possibly it is a matter of light refraction, caused by the wood particles being broken up more finely. As an example of this point, a black crystalline rock, pulverized, may produce a light colored sand, due to the refractions of light. Coarse pulp is always darker than fine pulp. An experienced grinderman can walk through a mill and pick out the sharpest stones, simply by the color of the pulp. Sharp stones will retain

more of the yellow wood color than the duller stones. The colors will range from a near-white for the sharper stones to a light grey for the extremely dull stone.

In making a survey of the mill showing the highest grinding temperatures as recorded by the News Print Service Bureau, I found the condition was due almost entirely to local factors. White water was used on all showers, and for all other purposes thru the entire pulp mill, and little if any any fresh water entered the system. The ducts through which the stock traveled its route to the deckers was practically enclosed. The white water came back from the deckers in such a way that no heat was given up to the air. Nowhere did the stock or white water come in contact with the surrounding atmosphere long enough to give up the heat generated in grinding. The distance from grinders to decker room in this mill was very short compared to other mills, and this fact alone seems to account for the high grinding temperatures shown.

The heat in a system of this kind is highly conserved. The white water used as shower on the stones is at times 90 degrees or higher in temperature, and it is this condition which gives a showing of grinding temperatures of 185 to 195 degrees.

After making an exhaustive study, which was carried over a long period in which numerous tests were made I concluded that high grinding temperatures gave many benefits. Pulp that is to be used in mixing tanks without beating will be found to be much better hydrated if ground at a high temperature. Also a high temperature is the one efficient way to gain maximum production when producing a slow stock. But it must be remembered that if it is necessary to cut the showers down on the stones until the stock flows from the stone pit at high consistencies there will be no gains in quality.

Everyone is aware that the shower water is the greatest cooling medium entering into the grinding operation, but perhaps few realize just how great it is. The following table was taken from a number of tests made under regular operating conditions.

Using white water shower at an average temperature of 78 degrees F.

U. S. gals. per min.	Consistency	Pit Temperature
38.4	2.30%	98 deg. F.
23.9	2.77%	108 deg. F.
12.2	4.24%	147 deg. F.
11.1	6.04%	176 deg. F.
9.6	7.96%	192 deg. F.

Using fresh water shower at an average temperature of 42 degrees F.

U. S. gals. per min.	Consistency	Pit Temperature
30.8	3.44%	118 deg. F.
26.4	3.64%	120 deg. F.
19.6	4.25%	132 deg. F.
15.3	5.84%	156 deg. F.
5.3	8.62%	173 deg. F.

The above tests show clearly how the amount of shower water affects the consistency and temperature. The water used in these tests was carefully measured and the writer, and those assisting him, were astonished at the amount of water actually used as shower on the stones. The stones in use were 27-inch, making an average of about six tons of pulp daily. The test indicated a shower requirement of from four to five thousand gallons of water per ton of pulp.

A number of tests have been made to show the relation of temperature, consistency, strength and freeness. It might be well to state here that the freeness and strength tests referred to in this article were not stan-

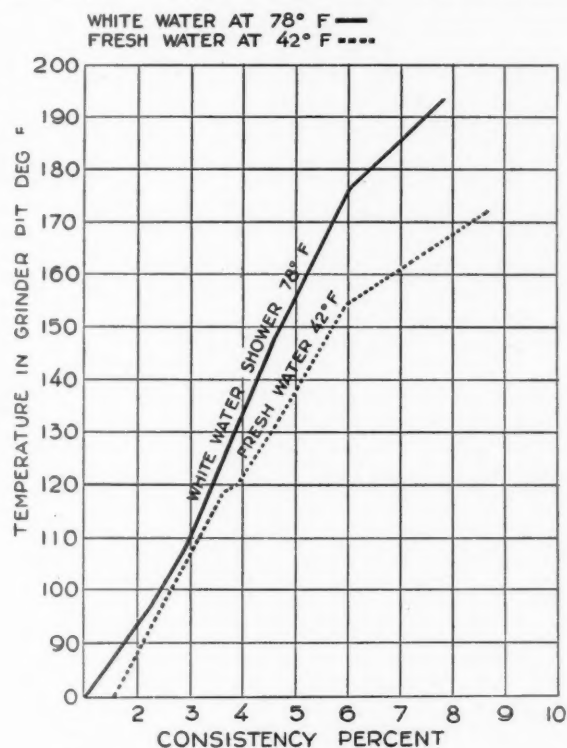
dardized with other mills and therefore are only comparable in their relation to each other.

The following tests were made grinding 100% Sitka Spruce, using white water shower at 78 degrees temperature. The stones were jigged with a 1½ lead spiral burr with 8 cuts per inch.

Table No. 3

Consistency Pct.	Strength Pct. per Gram.	Temperature	Freeness
5.52	39.4	153 deg. F.	45
5.51	51.1	156 deg. F.	39
5.84	41.8	158 deg. F.	57
5.23	47.7	160 deg. F.	44
6.32	43.8	171 deg. F.	47
7.38	41.4	178 deg. F.	56
5.23	53.8	180 deg. F.	21
8.95	36.6	187 deg. F.	69
8.43	40.0	190 deg. F.	52
5.66	53.9	193 deg. F.	21

From the above it is seen that the closest relation is between freeness and strength; a high freeness, low strength; low freeness, a high strength. The two stones having the highest consistencies are among the lowest in strength. Temperature does not seem to enter into



the differences to any extent. A stone having a temperature of 156 degrees tests 51.1, a stone at 193 degrees tests 53.9, but there is a difference in freeness of 14 c.c., which would account for the stone with the higher temperature giving a higher strength reading.

In conclusion, it appears that the highest temperature at which to grind would be a temperature where consistency and freeness are not sacrificed for heat. That wood hydrates more rapidly and that more incrustating matter is dissolved at higher temperatures, thus giving a better, hydrated pulp, is a generally accepted theory. But a few degrees difference in grinding temperatures between one mill and another would not make an outstanding difference between their finished product, providing all other methods of production of their new materials were the same.

Lebanon Mill Gets Third Machine Ready

By the middle of May, Crown Willamette Paper Co. expects to have a third machine in operation at its mill at Lebanon, Oregon. The machine has been moved to Lebanon from the company's mill at Camas, Washington, which represents but one of the series of moves for this somewhat historic piece of equipment.

No major additions to the Lebanon mill have been necessary. The machine has been installed in space already available. Some auxiliary equipment is also being installed to handle the additional stock necessary, this equipment including beaters and jordsans. With the third machine in production, the mill will have a daily capacity of 30 tons of sulphite wrapping paper.

No changes will be made in the steam plant, but some of the load will be taken from the steam engine and transferred to power which will be supplied by the public utility company.

A. W. Olson is manager of the Lebanon mill. The mill itself is one of the oldest on the Pacific Coast, having originally been started to produce papers from straw.

Rice Straw Mill Revived

Construction on the Pacific Coast Pulp and Paper Corporation's projected rice straw mill at Richvale, Calif., was to be resumed May 15, according to P. Swan, Portland, who returned early this month from San Francisco, where he conferred with C. A. Kieren, in charge of construction. Some changes in the set-up were to be made at a board meeting to be held on May 12, it was announced, following which no further delay in actual work was anticipated.

"Plans call for completion of all units about September 1, with production starting immediately thereafter," said Mr. Swan. "We will have a 40-ton capacity at the start. Later we expect to enlarge to provide for an 80-ton capacity. Our initial production will be wrapping paper, with a switch to bond paper soon after getting into production."

Mr. Swan stated that additional financing had been received from an unexpected source, thus providing ample capital for development. Construction details, a list of equipment for the project, and the names of the promoters were published in previous issues of PACIFIC PULP AND PAPER INDUSTRY.

Longview Building Container Plant

If construction continues at its present rate the Longview Fibre Co. will be able to complete and begin production about June 15 in its new container plant, which it is building for the manufacture of solid fibre containers.

The new addition adjoins the finishing room and warehouse of the main plant. The new unit employs heavy mill type construction.

Resident Manager R. S. Wertheimer points out that the steady and gradual replacement of the wooden box by the fibre container by the packers of fish, fruit and vegetable products is widening the market for the newer containers. His company will produce a new lightweight container possessing several advantageous features.

Pigman Inaugurates Sales Campaign

C. W. Pigman of the Crown-Willamette Paper Co. spent a few days in Denver inaugurating a sales campaign for pushing kraft gummed tape. The campaign is already off to a good start.

Proposed Eugene Mill In Abeyance

Construction of the Pacific Paper Products Co. converting plant at Eugene, Oregon, scheduled to start early this spring is being held in abeyance, pending greater headway in the financing program, according to information from that city. Announcement was made early this year that \$125,000, or one-fifth the necessary capital had been subscribed by the promoters, and that the remaining four-fifths was to be secured through public financing.

P. J. Lamoureux, who is to be general manager of the projected plant, declined to make an official statement, when interviewed early this month.

"I have no definite announcement to make at this time," declared Mr. Lamoureux. "Our plans are unchanged and we will start construction just as soon as sufficient capital is raised."

Plans call for the ultimate manufacture of 15 grades of paper used in specialty mills.

Port Townsend Bag Factory Denied

Port Townsend, Washington, was considerably stirred late in April by an announcement believed to have originated in a Seattle daily paper to the effect that the Crown Zellerbach Corporation, thru subsidiaries, had secured a site at Port Townsend on which it proposed to build a paper bag factory. Subsequent reports in the dailies carried official denials.

In an official statement to PACIFIC PULP AND PAPER INDUSTRY on May 5 the reports were branded entirely without foundation.

At Port Townsend is located the 200-ton kraft pulp and paper mill of the National Paper Products Co., division of the Crown Zellerbach Corporation, completed last year.

Killam to Look Over Eastern Mills

Lawrence W. Killam, president of the B. C. Pulp & Paper Company, Vancouver, B. C., is leaving for the east in May to visit several new eastern pulp and paper mills.

At the plant of the Mersey Paper Co. in Nova Scotia Mr. Killam will be joined by W. L. Ketchen, his plant manager at the Port Alice mill, who preceded him east and has been visiting various customers of the B. C. Pulp & Paper Co. in the New England states.

The Mersey Paper Co., which recently opened one of the biggest mills to be established in the maritime provinces, is controlled by interests headed by I. W. Killam, cousin of L. W. Killam and one of the outstanding financiers of eastern Canada.

Mr. Killam will also visit the big plant of the International Paper Company, recently opened at Dalhousie, N. S. He expects to return about the middle of June.

A New Wrapping Material

Blake, Moffitt & Towne are now distributing in the West a new transparent wrapping material called Fibestra. The product is similar to Cellophane, manufactured by Dupont. Fibestra is marketed by the Sylvania Industrial Corporation of New York. Sylvania is erecting a plant at Fredericksburg, Virginia, to manufacture Fibestra. The base is cellulose.

The widening use of transparent wrappers of this class in recent months is rather astounding, giving rise to the thought of the new tonnage of wood pulp which will undoubtedly one day be necessary to meet the raw material demands of the product.

The Pacific States Paper Trade Association holds its thirteenth Annual Convention at Del Monte

ANOTHER Pacific States Paper Trade Association convention has been held, another week has been spent by Coast merchants and visiting manufacturers in the convention halls and on the golf links and the drives of beautiful Del Monte and another step forward has been taken toward the association's goal of bringing paper people closer and closer together, for their mutual benefit.

"These conventions are like the gathering of a happy family," said I. Zellerbach, San Francisco, president of the Crown Zellerbach Corporation, when he presided as toastmaster at the closing banquet of the meeting. "Here millmen meet merchants and merchants meet each other and each year we get closer to each other. More and more manufacturers are coming out from the East each year and I hope in time every mill executive in the United States takes his annual vacation on the Coast and comes as our guest to these gatherings and plays in our golf tournaments."

The convention was saddened by the news of the passing of Leonard Howarth, at Santa Rosa, Calif., brother of William Howarth, president of the Everett Pulp & Paper Co. Each year the late Mr. Howarth, an invalid, has attended the paper trade conventions as a guest and at this convention resolutions were passed expressing sympathy.

Similar resolutions also were passed in connection with the recent death of A. G. Towne, pioneer head of Blake, Moffitt & Towne.

More Eastern millmen attended this year's convention than ever before, it was stated and at the opening session on the Wednesday evening of the convention week the visiting manufacturers met with the delegates in the annual merchants and manufacturers session.

Business conditions throughout the nation were described by the visiting Easterners as extremely hopeful and the growth of the West as a pulp and paper manufacturing section was commented upon.

Sydney L. Willson, Holyoke, Mass., president of the American Writing Paper Co., who has been coming to

the Western conventions for several years, in one of the main talks of the Wednesday meeting, said: "I don't think we have anything to fear about business in this country. There has been, and is at present, a little depression in business but it is only because there has been injected into business conditions of today the

E. A. DORAN

Elected
President
Pacific States
Paper Trade
Association



element of fear, a fear based on a poverty of real facts about conditions."

Other speakers were Guy Hamilton Beckett of the Beckett Paper Co., Hamilton, Ohio; R. A. McDonald, San Francisco, Crown Willamette Paper Co.; A. B. Galloway, Salem, Ore., Oregon Pulp & Paper Co.; Willard E. Swift, Worcester, Mass.; Max Oberdorfer, St. Helens, Ore., St. Helens Pulp & Paper Co.; Harrison R. Baldwin, Erie, Pa., Hammermill Paper Co.; F. O. Fernstrom, Pomona, Calif., California Fruit Wrapping Mills; George Olmsted, Chicago, S. D. Warren Co.; Geo. W. Houk, Oregon City, Ore., Hawley Pulp & Paper Co.; H. L. Wollenberg, San Francisco, Longview Fibre Co.; Frank E. Floyd, New York, secretary of the National Paper Trade Association.

President W. B. McWaters commented favorably on the close relations enjoyed during the past year between the merchants and millmen. Secretary Charles Kahn thanked the members for their cooperation in preparing the monthly "business average" statements, which have proven that business conditions in the paper industry on the Coast show the same fluctuations as in the East. Mr. Kahn also declared that as a result of action taken at the 1929 convention, the members during the past year have formed credit chapters in their paper trade locals and also pointed out that the industry in the West has adopted the 1,000-sheet count as a unit of weight and the carton pack as a unit of sale. Association members have adopted these steps 100 per cent and many of the independents have fallen in line.

O. W. Mielke, Portland, Blake, Moffitt & Towne, in his talk on "Advantages and Disadvantages of Coast

(Turn to page 36)

PACIFIC STATES PAPER TRADE ASSOCIATION 1930-1931 OFFICERS

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Executive Vice President—George I. Tompkins, Sierra
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Vice Presidents

For Northern California—H. S. Bonestell, Bonestell &
Company, San Francisco

—E. A. Breyman, Zellerbach Paper Company,
San Francisco

For Southern California—W. E. Taverner, Taverner &
Fricke, Los Angeles

For Northwest—J. W. Thompson, Blake, Moffitt &
Towne, Seattle

Secretary-Treasurer—Charles Kahn, San Francisco

NEXT CONVENTION

Del Monte—Week of May 10, 1931

M. J. Scanlon Elected Powell River President

M. J. Scanlon, of Minneapolis, is the new president of the Powell River Company. He was elected to succeed his old partner, Dr. Dwight F. Brooks, who died recently in California.

Mr. Scanlon formally stepped up to his new office at the annual meeting of the company's board of directors, held in Vancouver, B. C., on April 29. He had previously been first vice-president.

A. S. Brooks and Paul A. Brooks were elected vice-presidents, with S. D. Brooks remaining executive vice-



M. J. SCANLON
Elected president
Powell River Co. Ltd.

president and A. E. McMaster general manager. The two first-named vice presidents retain their offices as secretary and treasurer of the company.

"The policy of the company will remain unchanged," said Mr. Scanlon after the meeting. "We will carry the work now under way at Lois River to completion. This includes some \$8,000,000 expenditure on development which will greatly increase the power available for the company and add one paper machine, bringing the capacity of the plant to seven machines and about 650 tons daily production. We will add an eighth machine when market conditions warrant."

One of the pioneers of the pulp and paper and logging industries of the Pacific Northwest, Mr. Scanlon has been associated with the Powell River Company since its earliest days. Two decades ago when the late Dr. Brooks was spying out the land, Mr. Scanlon was financially interested in the project that was to grow into the leading newsprint producer on the Pacific Coast.

After the annual meeting the directors proceeded to Powell River on the company yacht, "Norsal." The party included Mr. Scanlon, A. S. Brooks, Franklin J. Griffiths of the Portland Electric Power Co., M. J. Brady, of Chicago, and Mr. McMaster.

Powell River Construction Moves Ahead

Power equipment for the new Stillwater plant of the Powell River Company in British Columbia is arriving, and during the next couple of months will be installed, as the \$8,000,000 construction program is being carried out according to schedule. The electric generator is the work of the Canadian General Electric Co., while Canadian Engineering Co., of Quebec, built the turbines.

The power plant will add 18,000 H.P. to the energy already available at Powell River and will be sufficient to drive the seventh paper machine and auxiliaries to

be installed there by the company. Eventually 45,000 H.P. will be developed.

A 10-foot wood-stave line, 3,000 feet long, will carry water from the temporary dam to a section of the permanent pipe-line running from the site of the permanent dam to Stillwater.

Day and night shifts are now employed on two portals of the 5800-foot tunnel. From the south end more than 20 feet daily has been the average progress—straight rock work, most of it.

Steel penstocks 2,700 feet long will carry the water from the tunnel mouth direct to the power house, where the 18,000 KVA generator and 22,000 H.P. turbine are to be installed.

The power transmission line between Stillwater and Powell River has already been completed by Stuart Cameron & Co., contractors for the whole of the \$8,000,000 expansion job.

Rapid progress is being made on the machine room now under construction at Powell River, which will house a new 226-inch, 1,200-foot speed, news machine.

New Port Angeles Mill Nearing Completion

Outstanding developments in the Olympic Forest Products Company's pulp and lumber mill project at Port Angeles, Washington, during the past month were the starting of a dredging and filling job, completed installation of one steam turbo-generator and installation of part of the pulp machine room equipment.

The Tacoma Dredging Co. started one of its suction dredges to work on April 23 on a contract to remove 150,000 yards of material from the bay bottom surrounding the mill's 1,200-foot wharf. The muck is being piped across the dock to the mill site, where it is being deposited to fill in space beneath the pile-supported sawmill and warehouse.

The Glines Canyon hydro-electric powerhouse on the Elwha river was shut down in April for repairs to the wheel, and its load to the Washington Pulp & Paper Corp. news print mill was carried by the newly-completed generator at the Forest Products plant. The 5,000 KW mill unit is to be an auxiliary power supply plant for the Washington Pulp company. A second turbine is to be installed for the Forest Products company itself.

One of the last shipments of pulp machinery for the company was delivered at Port Angeles on the first of May by the steamer Knoxville City.

Pipe-laying on the Elwha Water Division project, which is to supply the Forest Products and other mills with water, is to be completed in May. Tunnel linings also are expected to be finished during the month and the system probably will be ready to deliver water in June.

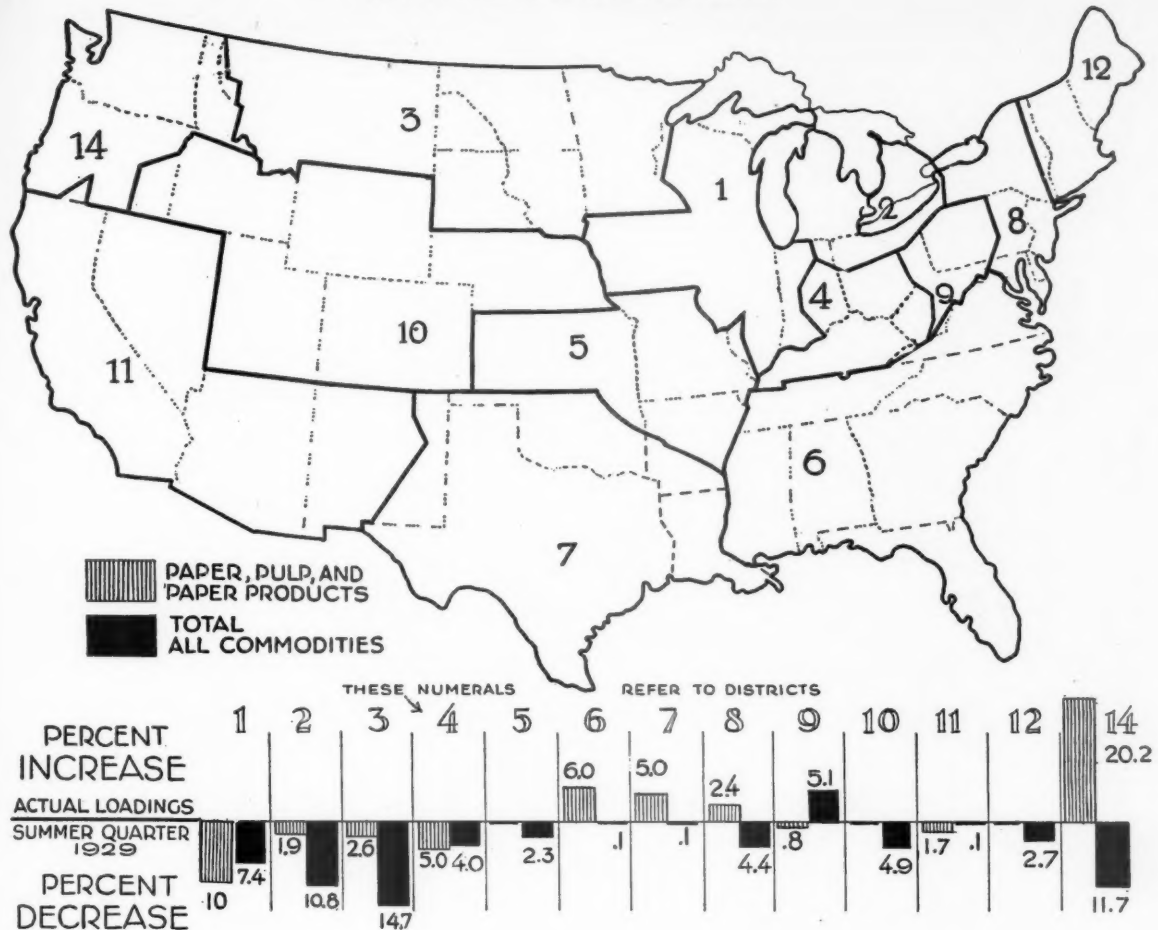
The mill is expected to begin production in June.

Harold Fretz Joins New Port Angeles Mill

Resigning his position as chemist at the Cascade Paper Co., Tacoma, on April 26, Harold T. Fretz, for five years with the Cascade mill, began his duties on May 1 as control chemist at the new 175-ton bleached sulphite pulp mill of the Olympic Forest Products Co., now nearing completion at Port Angeles, Washington.

Brazeau Visits California

William Brazeau, Inland Empire Paper Co., Millwood, Washington, was in San Francisco recently for a few days on his way South.



Pacific Northwest Pulp and Paper Industry Shows Activity

In strong contrast with a general decrease in anticipated freight car requirements all over the United States for the second quarter of 1930, and in particular contrast with decreases in most sections of the country for anticipated car requirements to move pulp and paper products, the Pacific Northwest stands out in bold relief by anticipating a 20.2% increase.

Reference to the accompanying chart will show that total anticipated car requirements for the second quarter of 1930 show an average decrease of 4.2% when compared with the actual loadings for the same quarter of 1929. The one bright spot is the Allegheny region where a slight increase is shown. The chief commodities of the Allegheny region being iron and steel, and the allied products of coal and coke, it would seem that the demand for these basic materials could be taken as a forecast of better business weather ahead.

It will be seen that in only three regions do the anticipated car requirements for pulp and paper products show an increase, and in each case it is comparatively small. The slight increase in the Atlantic States region can perhaps be attributed to the recent placing of several old mills in New York state back into production, believed by many to be purely a temporary situation.

The increased requirement in the two Southern areas

is accounted for by the great activity in new sulphate mills in the South in recent years. The Wisconsin territory seems hardest hit, registering a 10% decrease.

The 20.2% increase for the Pacific Northwest stands head and shoulders above the rest of the country. It is accounted for in the great activity in the building of new mills and the remodeling of old and the moving of new tonnage from these mills as they go into production. Total Pacific Northwest requirements for all commodities show a 11.7% decrease, caused mainly by depression in lumber, which is the region's chief commodity.

The quarterly forecasts of the Regional Advisory Boards of the American Railway Association are regarded by economists and leading executives as unusually accurate estimates of business conditions. Founded to equalize demand and supply and now supported most heartily by both railroad and shipper for mutual benefit, the forecasts have established a reputation for estimating requirements within 3% of the actual loadings.

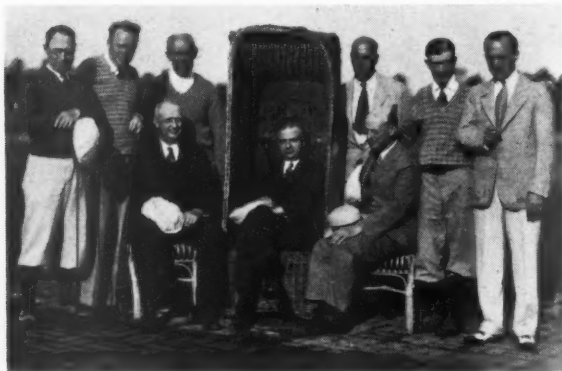
Total loadings from the Pacific Northwest territory are not a complete index of activity because a great many of the mills in the region are located on tidewater and move much of their output—and receive much of their raw material—by water.

Paper Trade Convention

(Continued from page 33)

Mills Establishing a Suggested Scientific Mark-up for the Resale of Their Products," said the plan had not been made uniform enough yet to make a definite report or recommendation. The plan has worked well in wrapping papers, where it has been tried.

George I. Thompkins discussed "Credits and Collections" and made recommendations which are to be acted upon by a committee of which he was named chairman and which will be composed of members elected by the five locals: Spokane, Seattle-Tacoma, Portland, San Francisco and Los Angeles.



SEATING ARRANGEMENTS BY THREE
ENVELOPE CHIEFS

Top row—Earl Van Pool, C. G. Bennett, W. D. McWaters, Harrison Baldwin, Wm. Guthrie and J. E. Wuenschel. Seated—Robert L. Allison, W. E. Swift and Geo. R. Davis.

Victor E. Hecht, Los Angeles, Zellerbach Paper Co., in his paper on "Curtailement of Unnecessary Expenditures for Sales Promotion and Advertising Departments," favored intelligent sales promotion, but deplored the increasing mass of advertising material sent out by paper mills, quoting one printer as saying he would have to give up his business if he expected to keep up with mill advertising.

"We in the paper business are particularly conscious of the fact that there is a tragedy of waste in advertising and especially in mill advertising," he said. "It would seem quite sane to suggest that mills confine themselves to advertising which educates and in speaking of advertising which educates I have in mind particularly the splendid 'Survey of Business Practice' by the Hammermill Paper Co., the 'More Business Series,' 'Selling With the Help of Direct Advertising,' 'How to Plan Printed Pieces to Save Time and Money' and 'The Estimator's Chart' by the S. D. Warren Co., the Chicago Paper Company's 'Book on Color,' the 'Printer's Service Book of Gummed Labels' of the Dennison Manufacturing Company, and the 'Buckeye Book on Advertising' from the Beckett Paper Company. Like these works, there should be something tangible behind every piece of advertising."

Louis A. Colton, San Francisco, Zellerbach Paper Company, discussed "Simplified Practices." He favored standardization of merchandise and elimination of unnecessary duplication of stocks. The Federal Trade Commission, Mr. Colton reported, has succeeded in eliminating duplication in other lines of industry and should be encouraged in its efforts to standardize sizes and colors in the paper industry.

Then there was a discussion on the subject: "Should the Pacific States Paper Trade Association Endorse the National Paper Trade's Association to Establish a Twine and Cordage Division?" Secretary Floyd of the national body told of the progress being made in the East along this line and the convention then moved to endorse any action taken by the larger association.

M. R. Higgins, chairman of the committee on Trade Practices, reported the members were gathering many suggestions for trade practices and sending them to the National Paper Trade Association which is working with the Federal Trade Commission in drawing up a code of practices for the industry.

The Mill Relations Committee, E. A. Doran, chairman, reported that the Coast merchants were enjoying splendid relations with the mills, particularly in the wrapping paper field.

Eugene A. Breyman, San Francisco, Zellerbach Paper Company, chairman of a committee on "Cost of Deliveries," asked the members to cooperate so that proper recommendations may be submitted at the 1931 convention. Mason B. Olmsted, San Francisco, Zellerbach Paper Company, chairman of the committee on the "Uniform Method of Merchandising," reported that while a uniform method of merchandising had not yet been reached on the Coast, efforts were being made. Local conditions, he added, make it almost impossible to have the same rules apply in the various communities. The thought is, however, he explained, that the same spread and the same cost percentages be applied along the Coast.

W. B. Reynolds, San Francisco, General Paper Company, chairman of a special committee of "Skid Packing," reported that manufacturers, transportation companies, jobbers and printers all favored skid packing and predicted that this method of moving paper was here to stay. Mills report that savings of from 25 to 90 per cent can be made in loading time and labor. The committee recommended that 3,000-lb. skids be adopted, that a standard clearance of skids from floor be agreed upon, that the size of platforms be standardized and that the non-returnable skid be used.

H. L. Zellerbach, San Francisco, Zellerbach Paper Company, reported that the "Committee on Simplification of Printing and Wrapping Papers," stating they had been endeavoring to cooperate with the government in adopting standard sizes on various papers, but advocated that one item be taken up at a time.

At the Friday night banquet of the association, H. L. Todd, San Francisco's postmaster and historical authority, made a stirring talk on "The Birth of a Nation."

Mill Men Organize

Pacific Coast Association of Pulp and Paper Manufacturers

DEFINITE organization of an association of Pacific Coast manufacturers of pulp and paper was effected at Del Monte May 17 when a group met and decided that in the best interests of the growing coast industry such a body should be formed. The organization was named the Pacific Coast Association of Pulp and Paper Manufacturers. It is expected another meeting will be held in Portland before the first of August to elect officers.

The association will take up legislation, tariff, taxation, raw materials, utilization of waste, traffic, safety, costs, trade customs and research. An annual conven-

tion is planned for May of each year at which time all matters pertaining to the industry, including the above-named items, will be discussed and acted upon.

While there is to be no direct or official connection with the American Paper and Pulp Association, the Pacific Coast body will dovetail its efforts with that of the national organization.

The organization formed at Del Monte resulted from the work of a temporary organization committee on which were William Howarth of the Everett Pulp & Paper Co., chairman; George W. Houk of the Hawley Pulp & Paper Co., and Max Oberdorfer, St. Helens Pulp & Paper Co.

J. L. Murray, of the Everett company, has been acting as chairman in place of Mr. Howarth and served as secretary and presiding officer at the Del Monte meeting. Mr. Murray has long been advocating an association of the West Coast pulp and paper manufacturers and is one of the prime movers in this step.

At Del Monte a nominating committee was named to select a slate of officers and submit this to the meeting at Portland. This committee is composed of George Houk, Max Oberdorfer and R. A. McDonald of the Crown Willamette Paper Co.

According to Mr. Murray, 18 plants are eligible for membership in the association, membership being confined strictly to the western states and not including Canada. Converters or merchandisers of pulp and paper are not eligible, the rolls being open only to those who actually manufacture pulp and paper. Mr. Murray hopes for 100 per cent representation at Portland.

It is thought the manufacturers association will work closely with the Pacific States Paper Trade Association, but it is announced there will be positively no official connection between the millmen and the trade. The paper trade association has long been anxious to see an association of millmen formed, for such a body could discuss matters brought up by the trade body for the general good of the industry and handle affairs applying to all the Coast mills.

DELEGATES AND VISITORS AT DEL MONTE

LOS ANGELES—F. M. Couch, Blake, Moffitt & Towne; G. I. Tompkins, Sierra Paper Co.; W. E. Taverner and C. H. Fricke, Taverner & Fricke; J. Y. Baruh and V. E. Hecht, Zellerbach Paper Co.

PORTLAND—O. W. Mielke, Blake, Moffitt & Towne; W. D. McWaters, Zellerbach Paper Co.

SAN FRANCISCO—E. A. Doran and J. W. Towne, Blake, Moffitt & Towne; H. S. Bonestell and Charles Pritchard, Bonestell & Co.; W. B. Reynolds, General Paper Co.; T. A. O'Keefe, Pacific Coast Paper Co.; M. R. Higgins, M. B. Olmsted, Frank C. Stratford, H. L. Zellerbach, I. Zellerbach, L. A. Colton and E. A. Breyman, Zellerbach Paper Co.

SEATTLE—J. W. Thompson, Blake, Moffitt & Towne; W. L. Guthrie, Zellerbach Paper Co.

SECRETARIES—Charles Kahn, San Francisco, Pacific States Paper Trade Association; Joseph R. Coffman, Los Angeles, Los Angeles Paper Trade Association, and Frank E. Floyd, New York, National Paper Trade Association.

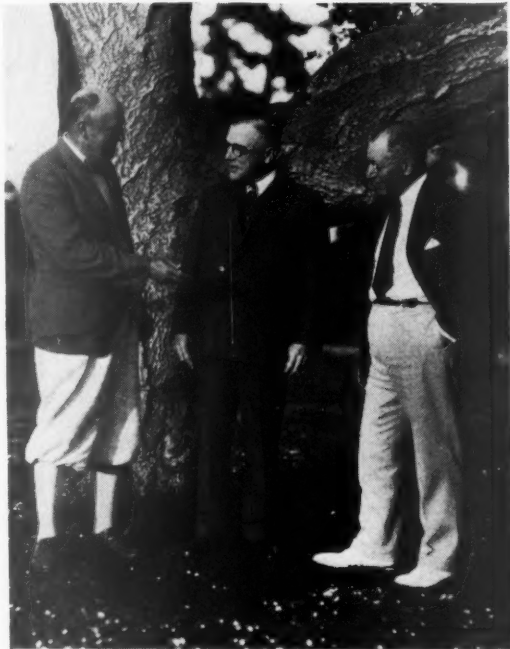
GUESTS—M. M. Baruh, San Francisco, Englander Drayage & Warehouse Co.; H. H. Zellerbach, San Francisco, Zellerbach Paper Co.; Dana W. Pratt, Chicago, Butler Paper Corporation; Harry L. Todd, San Francisco postmaster, and W. N. Patten, Honolulu, Patten Co., Ltd.

MANUFACTURERS ATTENDING

A. P. W. PAPER CO., C. J. Allair, San Francisco; AMERICAN WRITING PAPER CO., Sydney L. Willson and R. S. Madden, Holyoke, Mass.; W. J. McCormick, San Francisco, and E. P. Wesson, Seattle; BECKETT PAPER CO., Guy Hamilton Beckett, Hamilton, Ohio; BROWN CO., Earl Van Pool, San Francisco, and Lincoln G. Older, Los Angeles; CALIFORNIA COTTON MILLS CO., J. R. Millar, Oakland; CALIFORNIA-OREGON PAPER MILLS, L. H. White, Los Angeles; CASCADE PAPER CO., Andrew H. Cochran, West

Tacoma, Wash.; CROWN WILLAMETTE PAPER CO., G. J. Ticoulat and R. A. McDonald, San Francisco.

EVERETT PULP & PAPER CO., J. L. Murray and W. J. Pilz, Everett, and Augustus Johnson, San Francisco; FIBREBOARD PRODUCTS, INC., J. D. Zellerbach and W. H. Thomas, San Francisco; FOX RIVER PAPER CO., Joe Pirie, Appleton, Wis.; CALIFORNIA FRUIT WRAPPING MILLS, F. O. Fernstrom, Pomona, Calif.; GRAHAM PAPER CO., C. E. Swick and F. R. Philbrook, San Francisco; GRAYS HARBOR CORPORATION, J. F. Wuenschel, Hoquiam, Wash.; HAMMERMILL PAPER CO., Harrison R. Baldwin, Erie, Pa.; HAWLEY PULP & PAPER CO., Geo. W. Houk, Oregon City, Ore.; GEO. LA MONTE & SON, V. N. Savale, San



"YOU SEE THAT HAM DIDN'T LAST!"

Says one secretary to two others. Joe Coffman, Los Angeles, explaining to Frank Floyd of New York and Charlie Kahn of San Francisco what happened to that southern breakfast he had promised the two on his left and which failed to materialize after a three-mile walk.

Francisco; LONGVIEW FIBRE CO., H. L. Wollenberg, Longview, Wash.; EL REY PRODUCTS CO., O. Thomas, Los Angeles.

MARTIN CANTINE CO., E. B. Skinner, San Francisco; NASHUA GUMMED & COATED PAPER CO., James F. Nields, San Francisco; OREGON PULP & PAPER CO., A. B. Galloway, Salem, Ore; PACIFIC COAST ENVELOPE CO., George R. Davis, San Francisco; PACIFIC NORTHWEST PAPER MILLS, D. D. Madden, Portland; PACIFIC WAXED PAPER CO., C. M. Gregorie, Oakland; THE PATTERSON PARCHMENT PAPER CO., W. J. Gray and C. G. Bennett, San Francisco; CRYSTAL TISSUE MILLS, Edward N. Smith, Los Angeles.

U. S. ENVELOPE CO., Robert L. Allison, Springfield, Mass., and W. E. Swift, Worcester, Mass.; S. D. WARREN CO., George Olmsted, Chicago; WESTERN WAXED PAPER CO., Andrew Christ, Jr., Oakland, and G. C. Wieman, Los Angeles; BYRON WESTON CO., G. L. Giddings, Los Angeles; ST. HELENS PULP & PAPER CO., Max Oberdorfer, St. Helens.

THUMB-NAIL INTERVIEWS AT DEL MONTE

William E. Swift, Pres., U. S. Envelope Co., Worcester, Mass. Twenty years ago I came West to open our San Francisco branch and I have not returned since. This trip is certainly an eye-opener, for it has proven conclusively to me that out here in the West you have a wonderful country with a wonderful future, particularly for the paper business. As for our own business, fortunately, we manufacture what might be termed a necessity and we find conditions fairly good.

Tacoma Kraft Mill Sold

The Niagara Hudson Power Corporation on May 6 purchased all of the capital stock of the Union Bag & Paper Corporation, wholly-owned subsidiary of the Union Bag & Paper Corporation, acquiring in the transaction the new 120-ton kraft pulp mill—completed by Union Bag at Tacoma, Washington, in 1928—and certain water power rights at Hudsons Falls, New York. PACIFIC PULP & PAPER INDUSTRY on May 7 received telegraphic confirmation of the sale from both parties.

The Niagara Hudson Power Corporation is controlled by F. L. Carlisle, who is also president of the St. Regis Paper Company, and several other paper companies in the East. The St. Regis Paper Company alone has a daily capacity of 525 tons of various grades of paper.

While confirmation on this point was not secured it is believed that Niagara Hudson has arranged to sell the Tacoma pulp mill to the St. Regis Paper Company.

The Union Bag sale confirms one portion of a most persistent rumor which indicates that St. Regis Paper Company and Crown Zellerbach Corporation, dominating paper organizations on the Pacific Coast, are working toward an agreement. Details of this rumor were discussed rather fully on page 32 of the March, 1930, issue of PACIFIC PULP AND PAPER INDUSTRY. In that issue it was stated that a Union Bag-St. Regis sale was indicated as a preliminary step to a Crown Zellerbach-St. Regis hook-up. So far, however, officials stamp these latter rumors as false.

Oregon Pulp and Paper Earnings Ahead

The earnings report of the Oregon Pulp and Paper company whose plant is located in Salem shows the highest earnings in 1929 of any of the past five years. Net after interest and taxes amounted to \$208,007, as compared with \$133,593 in 1928. After preferred dividends this amounted to 11.8% for 1929. The following is the earnings statement for Oregon Pulp for the five-year period:

	1929	1928	1927	1926	1925
Income for Bond Int.	\$514,920	\$462,209	\$287,557	\$292,553	\$347,833
Deductions—					
Bond Int., Exp.	83,007	88,485	42,477	22,376	
Depreciation	198,420	221,817	179,674	133,827	130,969
Federal Tax	25,484	18,312	10,834	16,368	27,051
Net Income	208,007	133,593	54,572	119,779	189,813

F. W. Leadbetter of Portland, executive head of the Oregon Pulp and Paper mill announces for the Columbia River Paper Mills at Vancouver, Wn., of which he is also the head, the following earnings:

	1929	1928	1927	1926	1925
Income for Bond Int.	\$611,354	\$775,652	\$425,665	\$418,127	\$207,013
Deductions—					
Bond Int., Exp.	60,725	65,325	51,897	18,716	33,526
Depreciation	168,914	163,394	115,416	117,385	80,147
Federal Tax	37,724	66,085	35,443	35,583	None
Net Income	\$343,988	\$480,848	\$222,907	\$246,442	\$93,340

The capitalization of the Oregon Pulp and Paper company is \$1,215,000 first mortgage 6% serial bonds due from 1930 to 1941; \$800,000 8% preferred stock; \$1,300,000 of \$100 par common stock.

The capital of the Columbia River Paper mills is arranged as follows: \$920,000 1st mortgage series 6% bonds due 1930 to 1942; \$750,000 8% preferred stock; \$2,000,000 \$100 par common.

Crown Zellerbach Opens Building

The new Crown Zellerbach Building, 343 Sansome Street, San Francisco, was opened early in May and is now the headquarters for the executive and administrative staffs of the Crown Zellerbach Corporation.

An outstanding accomplishment in the reconstruction, was the conversion of a building, designed years ago, into a modern structure of the type that is transforming the skylines of American cities. The building is 12 stories in height and its rentable area aggregates 65,000 square feet.

Over five floors in the building have been devoted to the executive offices and to the offices of affiliated and associated companies. The executive suite will be located on the eleventh floor, which will include the offices of Louis Bloch, chairman of the board; I. Zellerbach, president of the corporation; M. R. Higgins, chairman of the executive committee; E. M. Mills, A. B. Martin, and J. D. Zellerbach, executive vice-presidents. These offices are handsomely appointed.

The board room of the corporation on the tenth floor is adorned with 10 mural paintings by Warren Chase Merritt, depicting both the history of paper making and scenes of the modern manufacturing process. Reproductions of these murals have been published in PACIFIC PULP AND PAPER INDUSTRY.

Below the executive offices are situated the administrative offices. Sales offices of Crown Willamette Paper Company are located on the seventh floor, in charge of R. A. McDonald, Vice-President.

The offices have been planned to consolidate the activities of the company.

Pacific Coast Pulp to Italy

In the interest of stimulating the export of wood pulp from Pacific Northwest pulp mills to Italy, Giovanni Colombo, pulp and paper broker from Genoa, accompanied by his brother Edward, who maintains a branch office in San Francisco, made a tour of inspection of Coast mills in May.

Mr. Giovanni Colombo states that there are some 200 major paper mills in Italy. While the per capita consumption of paper in Italy is still relatively low as compared to the United States, nevertheless a wide variety of papers are manufactured. These range from fine papers for printing and writing—comparable to our book and writing grades—which have only a high grade chemical pulp content; semi-fines, which may contain some groundwood; news print; and ordinary papers. Wrapping papers range from the heavy duty, strong grades to tissues, specialties, glassine, etc.

The Italian paper industry, Mr. Giovanni Colombo states, is almost entirely dependent upon outside sources of wood pulp. The annual requirements of the national industry he estimates at 150,000 long tons.

About two years ago Mr. Edward Colombo shipped the first test bale of Pacific Coast pulp to Italy. Since then regular shipments have gone forward to Continental Europe and thru the offices of Mr. Colombo South American buyers have been interested and are taking monthly lots thru Buenos Aires.

The Colombos have labored with shipping interests to secure equitable rates on wood pulp to the Mediterranean and feel that the prospects for increasing the pulp traffic are encouraging. Mr. Edward Colombo is the author of an article published recently in "Il Legno," Italian timber trade journal, in which the Italian industry was given an introduction to the growing pulp and paper industry on the Coast.

New Westminster to Resume Production

Rebuilding of the Westminster Paper Mills Co. at New Westminster, B. C., was nearing completion as April closed. President J. J. Herb, interviewed at that time, estimated that production would be resumed by the middle of May. The present units, upon completion, will represent an investment of nearly \$900,000.

The disastrous fire which gutted the plant last July completely destroyed the converting department. The paper manufacturing division fared better, however, and it has been possible to recondition much of the machinery and reinstall it.

The rebuilt mill has two divisions, a machine room and a converting plant. The buildings are of reinforced concrete construction with mill type roofs, completely equipped with automatic sprinklers. The machine room conforms to conventional design with the auxiliary equipment on the lower floor, and the beaters, paper machine and creping machine on the second level. The rolls of the Beloit paper machine have all been recovered by the Griffith Rubber Mills, some additional dryers have been added, and new rolls have been placed in the calendar. The machine will have a capacity of from 15 to 30 tons per day, depending upon the class of papers being produced.

Variety of Products

The converting plant will have three levels. Installation of converting machinery is somewhat behind the reconstruction in the other parts of the mill at the present writing, but will be in place in time enough not to interfere with production. The Westminster Paper Mills will resume production on its wide line of products, some of which are toilet tissues, paper napkins and towels, fruit wrappings, bread wrappers, both printed and plain.

The company in its seven years of existence has built up a good demand for its diversified products in British Columbia and Western Canada. In fact, this good will element was perhaps the greatest determining factor in the decision to rebuild.



A corner of the Westminster Paper Co., Ltd., mill showing portions of the (left) converting plant and machine room.

When President Herb came out several years ago from Wisconsin he founded the mill with his own money and that of friends he had in the paper business back in the Midwest state. At the time of the fire, the company was reorganized and the Wisconsin people diverted their interests to the West until now the company is entirely a British Columbia organization.

To aid in rebuilding it was necessary to float a bond issue of \$300,000. President Herb approached the city of New Westminster and an agreement was arrived at whereby Mr. Herb was to devote not less than 50% of his time personally to the affairs of the New Westminster plant and the city of New Westminster would in turn

guarantee the interest on the bonds. It is to the great credit of Mr. Herb that the bonds were oversubscribed by some \$70,000 within eight hours after they had been offered for sale.

The well established distributing firm of Smith, Davidson & Wright has purchased a 25% interest in the New Westminster mill, and, while this interest carries no control of the manufacturing side, it is regarded as a favorable hook-up for both parties, as the Smith, David-

J. J. HERB

President

Westminster Paper Co., Ltd.
New Westminster
British Columbia



son & Wright organization with their wide distributing facilities will naturally afford a major outlet for the wares of the rebuilt British Columbia mill.

Shortly after the fire it was announced that in rebuilding, the mill would install another machine and manufacture book paper. The second machine is for the time classified as a future improvement, but the move is still definitely considered. Book paper for Western Canada distribution now comes from the mills of Eastern Canada.

New Advertising Methods Proving Effective

Some months ago Carter, Rice & Carpenter in Denver decided to enlist the services of experienced advertisers to look after their sales production, outline the methods to be employed, put the methods to work and then more or less sat aside to see what would happen. Something did. The advertising department set to work getting out mailing pieces in every case using the materials they were trying to sell.

For instance, shirt boards for laundries were folded in four folds, carried a short message concerning their value to the laundrymen and quoting prices and with the fourth fold perforated so that it could be torn off and mailed in by the laundryman with his order.

The initial mailing of this particular "broadside" brought in orders for 250,000 shirt boards, yielding a net profit of forty cents a thousand boards. Two successive mailings to the same list brought in orders for approximately 100,000 boards each time.

Folders containing 20 stock wrappers for bread were tried out on retail bakers. The result was that the bread wrapper business of the firm which had been negligible grew into one of the headliners.

Roll paper table covers were folded into mailing pieces and sent out and brought in orders for themselves. Mosinee kraft was mailed out in its own dress with the same result. Laundry bags were folded and stuffed into envelopes and more orders came in. The method will be given a thoro tryout and is expected to prove entirely successful.

Laboratory Control

should be extended to the

WOOD ROOM

By H. E. BENJAMIN

Editor's Note—Mr. Benjamin draws his views from some eighteen years of practical experience in sawmills and wood rooms of pulp mills in Canada.

ALTHO laboratory control has been spreading steadily to include most of the operations in the pulp mill, it seems to have stopped short at the filling spout of the digester. In other words, it has been taken for granted by managements that the quality of pulp to be made would be determined in the digester, and that it was up to the pulp superintendent to do the best he could with the chips he got.

While the above point may be exaggerated a bit for the sake of emphasis, it is nevertheless true that a poor pulp can be made out of good chips but to make good pulp from poor chips is to ask the unreasonable. The wood room has been aimed too much at volume alone. Consequently, the wood room has been regarded solely as a mechanical process of the simplest order, whereas the truth of the matter is that there are dozens of opportunities for the application of intelligence in wood rooms, the result of which would show up favorably on the company's balance sheet.

If the aim of the company is to make a uniform high quality pulp, it must move the control of its operations farther back than the digester, must move control back to the log pond. In the eighteen years I have worked in the wood rooms of Pacific Coast mills—most of the time in charge of the department—there has been much opportunity to study the problems. The whole subject, once entered into, will be found to be surprisingly expansive and for the present article it must suffice to sketch a few high points.

Four Operations

Wood rooms of Pacific Coast mills include four quite distinct operations, to wit; breaking down the log, barking and removing imperfections in the wood, chipping, and screening. There are opportunities for improvement in practice in each operation, and in seeking improvements, the dual purpose should be borne in mind, (1) to lower wood costs and (2) to improve pulp quality.

Ordinarily the breakdown plant in the average pulp mill is simply a wholesale adaptation of the regular lumber sawmill, altho the ends sought are quite distinct. The sawmill is interested in preserving the original structure of the wood; the pulp mill wishes only to extract the individual fibres. The first opportunity for saving presents itself in the log pond. It would seem economy to pay more attention to sorting the logs in the pond and running them thru somewhat according to uniform sizes, rather than taking them as they come, large and small.

Let us break down a 24-inch log—a size perhaps fairly average for the Pacific Coast mills. In many

plants the sawyer, brought up in the lumber industry, takes too many cuts thru the log. He takes a thin slab off the side, kicks the log so that this slab side is down, makes another cut, kicks the log quarter way around again and cuts this remaining piece in half.

A better way would be to take off a big slab at the start—say nine or ten inches thick—then kick the log half way around and take one more cut. Two cuts is enough. The second method is quicker. It wastes less in saw kerf. It breaks the log into larger pieces, and that is desirable, for the less the log is cut up, the less is wasted.

The waste in saw kerf alone is better emphasized when it is pointed out that a band saw will cut out from $\frac{3}{16}$ to $\frac{1}{4}$ of an inch with each cut. A circular saw will cut out about $\frac{1}{2}$ inch. In three cuts thru the log, the equivalent of a $\frac{3}{4}$ inch board or better, two feet wide, and the length of the log, is consigned forever to the saw kerf pile. The mill has paid for its logs for the pulp value, not their fuel value.

Taper Sawing

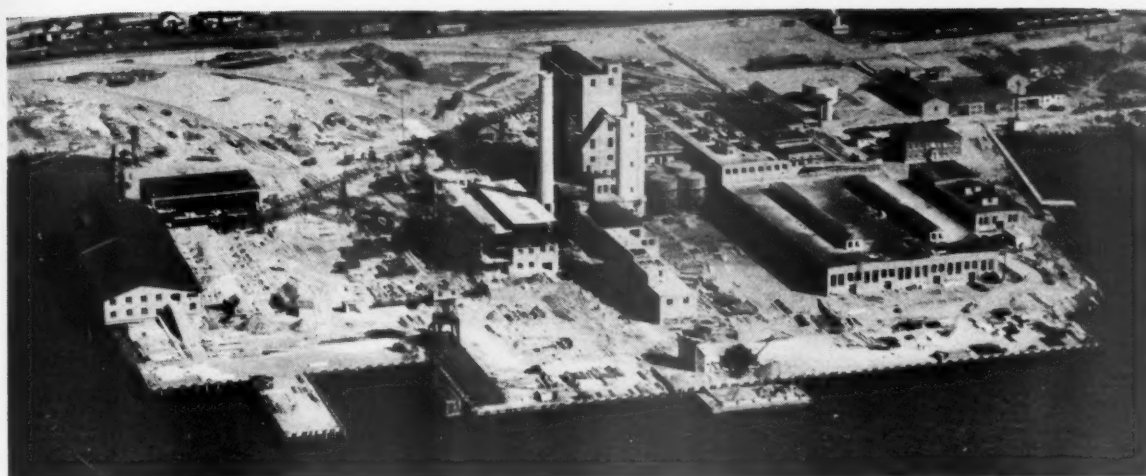
In some lumber sawmills, we now find taper dogs employed to saw logs according to the natural taper, the idea being to conserve more of the valuable part of the log and cut less into useless slabs. I understand one pulp mill on the Coast is to employ the taper method of sawing in its new wood room, and this is a sign of improvement.

A common practice in Coast mills now is to reduce the logs to cants of 4-foot length. A major consideration here of course is to provide pieces which can readily be handled by a man at the barkers. From the handling standpoint, this length is all right, but there would be less kerf if 6-foot, or even 8-foot, wood were used. There are distinct advantages in using the greater length as will be discussed later under chipping.

Many efforts have been made to find a suitable method of barking the whole log, but I do not believe that these efforts have contemplated any other than the usual lumber mill method of breaking down the log once the barking is accomplished. We may not be far from the day when the barking process will be taken out of its present position in line to be performed on the log as a whole, perhaps in the water of the log pond, more probably in the woods, with trees felled at the easy peeling period and logs peeled where they fall.

It is certainly within the realms of possibility to chip the whole log instead of breaking it down. There would be a number of advantages in the practice. The operation could be accomplished by feeding the logs on a horizontal conveyor to an inclined chipper. Or it could be done by keeping the chipper disc in its present vertical position and feeding the logs at an incline. It

(Turn to page 51)



Brubaker Aerial Surveys, Portland

This recent view indicates the progress being made on the new 175-ton bleached sulphite mill of the Puget Sound Pulp & Timber Co., at Everett, Washington. The mill is scheduled to get into production some time in June.

Moses H. Teaze Visits Coast

While his partner, Hardy S. Ferguson, has gone to Soviet Russia to supervise the construction of a large pulp and paper mill, Moses H. Teaze, second member of the well known New York pulp and paper mill engineering firm, visited the Pacific Coast last month.

Mr. Teaze inspected the work being carried out by the Hardy S. Ferguson organization at Everett, Washington, where the Puget Sound Pulp & Timber Co. is rapidly completing a fine new 175-ton bleached sulphite pulp mill.

During his stay Mr. Teaze also visited a number of other locations on the Coast and checked up on the plans of two prospective mills in Washington. On April 5 he attended the Spring meeting of the Pacific Section of TAPPI at Longview.

Executives Tour Puget Sound Mill Properties

On April 9 and 10 a group of executives toured the properties of the Puget Sound Pulp & Timber Co. from forest to pulp bale. Included in the party were Fred Enders and R. J. Egan of the Bulkley, Dunton Co., New York pulp brokers, Andrew Price, Seattle banker, Ossian Anderson, president, and R. H. Miller, Perry Knight and Ralph Dickey, officers of the Puget Sound company, Harry Lawton of the Peirce, Fair Co., investment bankers, Wylie Hemphill of the Pacific Coast Coal Co., and L. E. Hill, financial editor of the Seattle Post-Intelligencer.

The party went up to the Monte Cristo country at the end of the Puget Sound company's railroad, viewed logging operations, saw lumber milling in the rebuilt Clear Lake mill, visited the 100-ton pulp plant at Bellingham and made a thorough tour of the company's new 175-ton bleached sulphite pulp mill now near completion at Everett, Wash.

Harnischfeger Opens Spokane Office

The Harnischfeger Sales Corporation of Milwaukee, Wisconsin, announces the opening of a branch sales office at Spokane, Washington, 200 Symons Building, with J. L. Farrell, district representative, in charge.

This gives a total of seven branch offices in the Western territory which are under the jurisdiction of Mr. R. M. Taylor, vice-president of Harnischfeger Sales Corporation, with headquarters at San Francisco.

President Shaffer On Eastern Junket

The 50-ton unbleached sulphite pulp mill of the Shaffer Box Co. at Tacoma, Washington, continues to turn out its 60 tons or better of pulp this month while President Ralph Shaffer is away on a swing around the country with a delegation of some 40 of the leading men of Tacoma.

The mass idea of the Eastern trip is to carry the message of Tacoma's industrial opportunities to the Eastern centers. A most effective campaign has been planned, included in which is attendance at Washington, D. C., of meetings of the Chamber of Commerce of the United States.

President Shaffer's special forte is purveying information on pulp and lumber.

Also armed on the subject of pulp and paper is Frank E. Jeffries, manager of the Tacoma Paper & Stationery Co., one of the divisions of Blake, Moffitt & Towne.

Bates Valve Bag Opens Seattle Office

The Bates Valve Bag Corporation has opened offices in the new Joseph Vance Building, in Seattle, under the management of Ray S. Brown, to serve better their customers in the Pacific Northwest territory. This firm uses a large volume of kraft paper on the Pacific Coast, all of which is purchased from the National Paper Products Company, Port Townsend.

This Washington-made paper is shipped by water to Los Angeles, where it is converted into the Bates multi-wall bag which is used as a container for cement, lime, plaster and various other commodities of similar nature.

The Seattle office will serve the entire Pacific Northwest until such time as the volume of business in this territory is increased to warrant the construction of a converting plant in the Northwest.

The Bates Valve Bag Corporation was purchased some time ago by the St. Regis Paper Co., one of the strongest Eastern companies.

No Immediate Expansion For Salem Plant

Rumored immediate expansion of the Western Paper Converting Company's plant at Salem, Oregon, manufacturers of a wide variety of converted paper products of glassine, greaseproof, bond and other papers, received official denial in a question to the company's executives early this month.



PERFORMANCE PROVEN

INSURES

Uniform dryness of sheet.

Comparatively Small Initial
Cost for Installation.

Saving in Steam Consumption.

Increase in Production or a
Decrease in Steam Pressure.

Longer Felt Life

Small Space, Heat and Power
Requirements.

In the comparatively short time since its introduction to the paper industry in this country, the Ross Grewin High Pressure Ventilating System has already produced remarkable results in more than a score of prominent mills. In actual performance, it has proven its ability to insure the extra operating efficiency and economy that was claimed for it.

Two major advantages from its operation—namely, more even drying across the entire sheet and the appreciable increase in production—have alone earned for it the enthusiastic endorsement of mill and especially production executives.

The small cost for installation as compared to the many advantages it provides, entitles this system to the full consideration of fore-sighted mill managers throughout the industry.

J. O. ROSS ENGINEERING CORPORATION

201 No. Wells Street
CHICAGO

Main Office—122 East 42nd Street
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ROSS ENGINEERING OF CANADA, LIMITED
NEW BIRKS BLDG., MONTREAL

ROSS SYSTEMS

HEATING—VENTILATING—DRYING

When writing to J. O. ROSS ENGR. CORP. please mention PACIFIC PULP & PAPER INDUSTRY

McMaster On News Print

While the news print industry as a whole is somewhat in the dumps there is no occasion to despair, according to A. E. McMaster, general manager of the Powell River Co. Ltd.

"We have been riding on the ascending crest of the business cycle and we now are against a very normal situation in finding ourselves on the downhill side," Mr. McMaster said. "General business conditions show some falling off and naturally the news print industry reflects the general decline.

"As for the outlook, I would think that we should be content to hold even this year. News print has been, as you know, showing about a 7% annual increase in consumption."

Mr. McMaster pointed out that Powell River's present program of expansion, whereby a new 226-inch machine is being installed, is to protect the customers of the company.

Two factors for decreased consumption of news print were pointed out by Mr. McMaster. First, there has been a decline in the volume of advertising due to general curtailment of business, and second, the publishers have invoked mechanical expedients which decrease their demands.

For example, many papers are now ordering 68-inch rolls of news where formerly they purchased 72-inch rolls. The difference in the tonnage has, of course, had to be absorbed by the mills, for the publishers have simply narrowed the margins on their papers.

Sheeted Cotton Cellulose For Rayon

Sheeted cotton cellulose, the new-comer in the viscose rayon raw materials field is finding a widening market. Production of sheeted cotton cellulose at the Hopewell, Va., plant of the Hercules Powder Co., has shown a large gain since the installation of the modern paper machines there last fall, according to officials of the Virginia Cellulose department of the Hercules company.

Until quite recently wood pulp has been used almost exclusively as the basic raw material in the manufacture of viscose rayon. The use of cotton pulp in conjunction with wood pulp has been found to give improved characteristics to the rayon yarn, and cotton linters are now furnished in sheets so that they may be used in the same type of equipment as wood pulp.

Nothing New On Projected Salem Mill

There is little new to report on the proposed binder board mill at Salem, Oregon, projected by the Western Board Products Co. It is reported that orders for some machinery have been placed, but there is no confirmation. Efforts so far seem to be mostly concerned with lining up finances. The proposed mill would be of 8 or 10 tons capacity and utilize waste from a flax mill in Salem and wood pulp screenings.

No Second Machine At St. Helens

The perennial rumors about installing a second paper machine in the kraft mill of the St. Helens Pulp & Paper Co. at St. Helens, Oregon, again received official denial from President Max Oberdorfer early this month.

The latest rumor got down to dimensions and had it that a machine of 220 inches in width was to be installed. The present plant, beginning operations in late 1926, has one machine with a rated daily capacity of about 60 tons of kraft paper.

Pacific Mills Completing New Building

About the first of July the Vancouver offices of Pacific Mills, Ltd., now in the Standard Bank Building of Vancouver, B. C., will be moved into the new converting plant and office building which the company is erecting on the Vancouver waterfront adjacent to the B. C. Sugar Refinery.

Construction of the building, which is of heavy mill-type, is now moving along nicely. When completed the converting department now operated by the company in connection with its paper mill at Ocean Falls, B. C., will



Pacific Mills, Ltd., is building a new converting plant and office on the Vancouver waterfront in British Columbia.

be moved to Vancouver with the exception of a few processes which are more feasible to carry to completion at the paper mill.

Officials of Pacific Mills Ltd. cite a number of reasons in favor of transferring the major portion of the converting plant to Vancouver. One very important factor is the labor question. An under-supply of women workers at Ocean Falls, which is a "company" town, has made it necessary to recruit workers from Vancouver. These imported workers develop some real problems in housing in the mill town.

At Vancouver the labor will be drawn from the city at large and an easy distinction can be drawn between the affairs of the individual and the affairs of the company at the time clock, a condition not possible at an outlying "company" town.

Further factors bearing on the change in location are certain economies effected in shipping raw materials to Ocean Falls and shipping them back in the form of finished products. Among items of this class were paraffine for waxing and fibreboard containers for shipping.

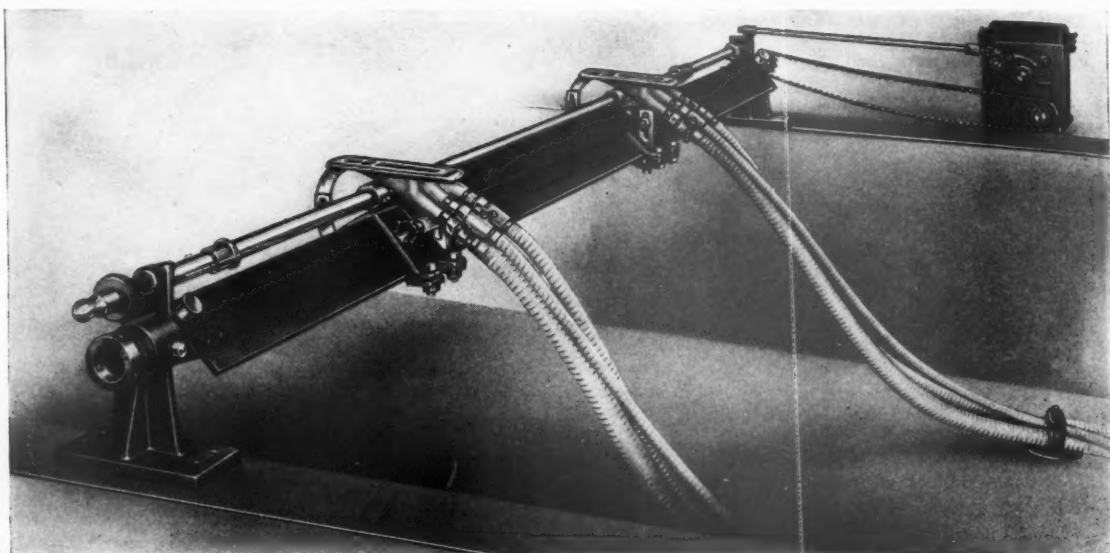
Further, the converted paper stocks can now be warehoused at Vancouver, the center of the distributing area and quicker service will be possible on the finished goods.

Olympic Railroad Buys Special Pulpwood Cars

Eighteen of the 42 new cars recently added to the rolling stock of the Port Angeles Western Railway are equipped with side racks and are especially designed for hauling pulpwood in cordwood form.

The railroad, which extends into the Western Olympic peninsula of Washington from Port Angeles, will bring pulpwood to the three mills in that growing pulp and paper city, the Washington Pulp & Paper Corporation's 300-ton news mill, the Fibreboard Products Inc. board plant, and the new 150-ton bleached sulphite pulp mill of the Olympic Forests Products Co. now nearing completion.

Ask ANY user about Vickery Felt Conditioners



◀▶
**THE VICKERY
FELT
CONDITIONER**

Any paper maker who uses Vickery Felt Conditioners will tell you they keep his felts clean as new from the time he puts them on the machine until he finally has to replace them. He'll tell you about increased production, improved quality. And he'll probably report a substantial increase in felt life.

▶◀
Let us send you a list of Conditioner users. Better still, let us put one in your mill, on trial, so you can see for yourself how profitable it is.

BIRD MACHINE COMPANY
SOUTH WALPOLE
MASSACHUSETTS

When writing BIRD MACHINE CO. please mention PACIFIC PULP AND PAPER INDUSTRY.

Japanese Paper Mill Merger Looms

Recent advices from Japan indicate that the economic depression persists, but that business is not getting worse. Unsettled conditions in China are having their effect on the business of Japan.

An interesting rumor intimates a struggle for control involving three of the major pulp and paper concerns of Japan. The Fuji, Oji, and Kabafuto Kogyo paper mills—three largest in Japan have been strong competitors for years. The Fuji and Kabafuto companies are both controlled by a single president, Mr. Ohkawa. To complicate the situation, the Oji company holds 200,000 shares in the Fuji organization and have their representative as managing director.

President Ohkawa is said to have planned to merge Fuji and Kabafuto, but Oji, hearing of the rumor, bought a large block of shares in the Fuji organization. The present position of President Ohkawa's companies is reported to be somewhat uncomfortable at the present time due to the "bear" movement on the stocks of his companies and the general economic depression.

Latest advices are that Oji has proposed an Oji-Fuji merger, Oji shares to go in at par while Fuji and Kabafuto capitalization would be reduced quite drastically in the exchange of shares.

The Japanese directors estimate that operation costs can be reduced some five millions of dollars annually thru consolidation of efforts. Such a merger, would, of course, have important effects on the Japanese pulp and paper industry and would no doubt have an important bearing on pulp imports.

Editors Note:—Last minute reports from Japan regarding the amalgamation of Fuji, Oji, and Kabafuto, are that the bankers of Fuji and Kabafuto are averse to the scheme in view of their heavy commitments and the entire matter has been put aside for the time being. Kabafuto has been forced to a second reorganization and will probably declare only a 5% dividend for the term just concluded.

Wood Pulp Imported by Japan

February, 1930

England	118,133	
U. S. A.	600,400	
Germany	775,733	18,000
Sweden	1,264,000	65,333
Norway	806,267	
Canada	16,608,800	
France	282,800	
Sundries	310,000	

20,766,133 83,333

Total Imports of Wood Pulp 20,849,466 Lbs.

Second Annual Shopping Day In Denver

The Second Annual Shopping Day conducted by the printing industries of Denver on April 9 proved as great a success as the first held in 1929 even though the total purchases were somewhat less. This year 4,145 individual purchases were turned in, and they ranged from a three cent purchase of a newspaper to a \$4,000 Pierce Arrow. Last year purchases of real estate aided in amassing a greater total whereas this year such purchases were negligible.

As in 1929 the Shopping Day went under the emblem of The Friendly Giant. The emblem has come to mean something to the city inasmuch as 57 advertisers carried it in their display space on the day preceding and on the day of the Printers' shopping. Buttons, wind-shield stickers, street car placards, window cards and

placards on trucks of allied trades carried the message of the day and made the public well aware of the fact that the printing industry, with its associated trades, cut an enormous factor in the purchasing power of the city residents.

B. C. Paper Jobbers Refinanced

Smith, Davidson & Wright, British Columbia paper merchants, have completed the sale of 3,000, 7% shares to the Royal Financial Corporation. The stock will be placed on the market shortly.

Head offices of the company are in Vancouver, B. C., altho branch offices are maintained in Victoria, Calgary, Edmonton and Saskatoon.

Proceeds of the issue are to be used in acquiring a large block of common stock of the Westminster Paper Co., whose new plant at New Westminster will soon be ready to resume operations. Additional funds are also sought for working capital and liquidation of bank loans.

Directors of the company, which has been in business for 23 years, are: Frederick Smith, president; William E. Davidson, vice-president; Francis Wright, secretary; E. B. McDiarmid, of the Royal Financial Corporation, Victor W. Odum, of Odum, Brown & Co., and Cecil F. Cotton.

Schmidt Litho Expands Activities

Carl Schmidt, vice-president in charge of sales of the Schmidt Lithographing Co., San Francisco, is in Europe enjoying a three months holiday. Mr. Schmidt planned to spend a month visiting Mediterranean countries, then visit Germany and France. He is accompanied by Mrs. Schmidt.

The Galloway Company, said to be one of the biggest seed packet manufacturers in the country, is now known as the Galloway division of the Schmidt Lithographing Co., and has just moved into its new quarters at Second and Bryant streets, San Francisco.

Seeking new markets, the Schmidt Lithographing Co. has established a branch office in the Phillipine Islands. One of the first orders landed by the agent whose main offices are in Manila, was for sheet posters for La Insular Cigar and Cigarette factory in Manila.

Dielschneiders Celebrates Twenty-Fifth

The Felix L. Dielschneiders of the Oregon Paper Box Factory, Portland, celebrated their twenty-fifth wedding anniversary the evening of April 26 at the local Laurel-Club. More than 200 guests, including Portland box-makers and their families, company employes, and friends of the Dielschneider family, joined in the evening's program. George Sweet, of the Pacific Straw Paper & Board Co., Longview, Washington, was an out-of-town guest. The host and hostess were remembered with an infinite variety of silver pieces.

Represents Graham Paper Company at Yakima

Fred G. Statham is now representing the Graham Paper Co. in the famous fruit country of central Washington. Mr. Statham is located at 303 24th Avenue North, Yakima.

Pannier Covering Western and Coast Territory

P. J. Pannier, Patten Paper Co. of Appleton, Wisconsin, is making an extended trip covering western and coast cities in the interests of the firm. He made a stopover in Denver enroute.

**1000
Feet Per
Minute ~
202 Inches
Wide**

**TIMKEN BEARING
EQUIPPED**



Timken versatility contributes considerably to the efficiency of this machine—said to be the widest and fastest bond paper machine ever built, which is now in operation at the new mill of the Grays Harbor Pulp & Paper Company, Hoquiam, Washington.

The machine was built complete by The Bagley and Sewall Company with the exception of the removable Fourdrinier which was built by the Beloit Iron Works.

Every roll is Timken-equipped, for not only is it necessary that friction be reduced to its lowest terms, but shafts and gears must be held to micrometer precision, radial and thrust loads must be carried with a wide margin of safety, dependability must be assured, operating and maintenance costs must be forced to lowest limits . . . and it takes the exclusive combination of Timken tapered construction, Timken **POSITIVELY ALIGNED ROLLS** and Timken-made steel to meet and master all of these requirements.

THE TIMKEN ROLLER BEARING COMPANY, CANTON, OHIO

TIMKEN *Tapered Roller* **BEARINGS**

When writing THE TIMKEN ROLLER BEARING Co., please mention PACIFIC PULP AND PAPER INDUSTRY.

T - A - P - P - I

Pacific Coast Section

Endorses Support of TAPPI

Itself a corporate member, and with two pulp mills operating and a third fine new mill nearing completion at Everett, Washington, the Puget Sound Pulp & Timber Co. has, in a letter to Secretary R. G. Macdonald of TAPPI, gone out to record in no uncertain terms in favor of TAPPI and the work it is doing. An extract from the letter of the company's president, Ossian Anderson, follows:

"As the new organization for the big Everett mill is developed I can properly state that I am sure that membership in TAPPI and the other technical organizations will be an important item in the list of qualifications of the men selected.

"Experience in selecting men for technical positions and for operative positions over many years and observations of the careers of such men indicates positively that the man who has interest and foresight enough to join the work in his technical organizations is the man who makes good.

"The men who put off the joining of their association or who give but indifferent support in nearly every instance turn out to be drudges or drones and therefore are not of much use to an organization—the type who start low on the salary scale and stay down. The workers in the associations are the men who get the promotions because they are the kind who keep themselves informed and are ready to make process improvements when the opportunity comes."

TAPPI Men Join Crown Willamette Mills

Three members of TAPPI have recently shifted the scene of their activities. A. G. Natwick, formerly with the Lincoln Pulp & Paper Mills of Merriton, Ontario, is now with the Camas, Washington, plant of the Crown Willamette Paper Co.

Another new man at the Camas plant is Jan Hauge-rod, formerly sulphite superintendent at the Peshtigo Paper Mills, Peshtigo, Wisconsin.

E. H. Nunn, formerly chemist with the B. C. Pulp & Paper Co., at the Port Alice mill, is now at the West Linn, Oregon, plant of Crown Willamette.

One of the newest Pacific Coast members of TAPPI is Clarence Enghouse, in charge of the technical control department, Crown Willamette Paper Co., West Linn, Ore.

Ernest Mahler, vice-president of the Kimberly-Clark Corporation, Neenah, Wisconsin, and one of TAPPI's most interested members and workers, writes: "I am very happy to know that the Technical Association is getting under way on the Pacific Coast. It is not possible to lay down a standard rule as to where and how group organizations should be effected. My outside viewpoint would be that on the Pacific Coast a great deal of benefit could be derived by exchange of technical information between the various mills; that is, information not of a competitive nature. I am sure there must be many problems common to all mills in that part of the country that could be solved more speedily and at less cost by exchange of information and round table discussion."

Bleach Expert Pleased With Coast Prospects

Expressing a confidence that the Pacific Coast region held a great future for the conversion of its natural forest resources into pulp, R. D. Wolf, now president of the Pulp Bleaching Corporation, and formerly operating head of some of the best mills in the country, concluded a trip to the Pacific Coast last month. He expects to return again soon. During his stay he visited several Coast mills and checked over plans on some proposed pulp mills on which plans are nearing completion. He also attended the Spring meeting of the Pacific Section of TAPPI at Longview on April 5.

Mr. Wolf is a firm believer in giving the employee every opportunity to develop what latent initiative he may have. He believes that the modern way of encouraging exchange of information benefits all, and that the organization and the individual receives in this exchange in proportion to the extent it gives.

"There's a simple but forceful example of this," Mr. Wolf pointed out. "You have a dollar, and I have a dollar. Each of us gives the other a dollar, and still we have only a dollar each. But if you have an idea, and I have an idea, and we each give the other our idea, then we each have two ideas. Multiply this example and in terms of simple exchange the total fund of knowledge is increased enormously where large numbers of individuals are concerned.

"But the nice part about this exchange of ideas is that in addition to the simple exchange, the circulation of ideas serves to generate distinctly new ideas by reason of new versions, the application of fresh viewpoint.

"Valuable ideas may come from even the most humble employees. I recall some years ago when we were striving for fuel economy. We decided that if the employee understood why he was doing certain things he would take an interest and give us the results we were after. We were measuring our coal as it was fed to the boiler, when one fireman suggested that if he only knew when the boiler stopped steaming he would be able to judge his firing with more exactness and thus be able to fire more economically. This thought led to the introduction of the first steam flow meters.

"Several other worthwhile developments came out of that same fireroom, and all because we took the men into our confidence and told them what we were trying to do. There are many good ideas in the brains of men who find it difficult to express themselves. When we took the employees into our confidence, told them what we were trying to do, they began to think for themselves. The company benefitted greatly, simply because it applied a very elementary principle—the company multiplied the thinking power of the organization."

Anybody Challenge This Record?

For 52 consecutive hours the No. 6 machine at the Powell River Co., was operated recently, and the crew claim something approaching a record. Six shifts changed places during the period, but not a break occurred.

No. 6 machine was installed in 1926 and trims 234 inches. Running more than 1,000 feet per minute, a sheet of paper 605 miles long and approximately 20 feet wide passed in an uninterrupted run through the presses, dryers and calendars.

Laurence T. Johnstone, assistant branch manager of the Graham Paper Co. in Denver, made a trip to the home office at St. Louis late in April.

St. Helens writes...

The St. Helens Pulp & Paper Company, St. Helens, Oregon, are manufacturers of high grade kraft papers.



Above—Recent aerial view of the St. Helens Pulp & Paper Company's modern kraft paper mill at St. Helens, Oregon.



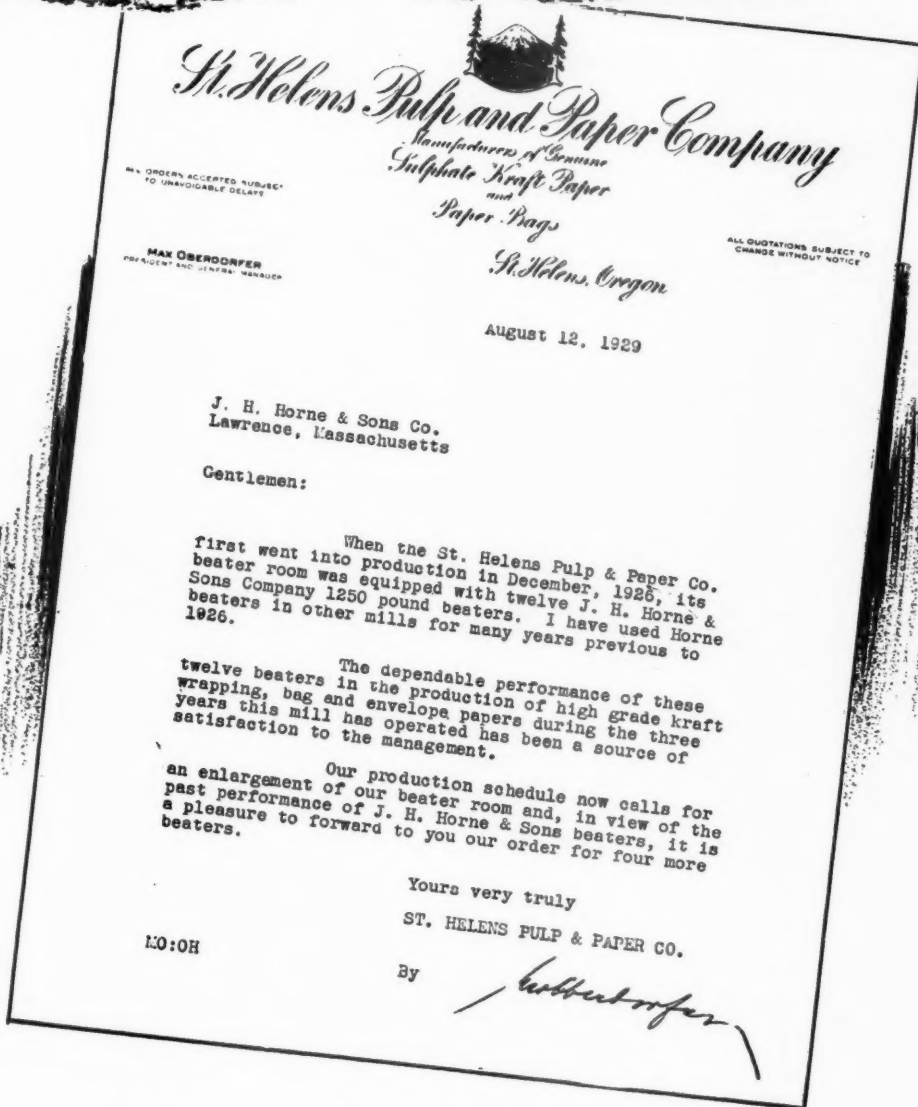
At Right—View of the original 12 HORNE KRAFT BEATERS at St. Helens.

J. H. HORNE & Sons Co.

LAWRENCE, MASSACHUSETTS

Established 1864

"In view of the past performance of HORNE BEATERS,
it is a pleasure to order FOUR MORE."



J. H. **HORNE** & Sons Co.

LAWRENCE, MASSACHUSETTS

Established 1864



Salesmen's Maxim ★
NUMBER 1

THE SALESMAN *who knows* *his business beats the "Good Fellow"*

CUSTOMERS like a "good fellow", but the modern business pace prevents a buyer from devoting much of his productive time to entertainment. His competition won't let him.

Buyers naturally welcome the salesman who inspires confidence, because they need him.

Confidence on the part of the buyer is the salesman's greatest asset, but sometimes takes years to acquire.

The salesman who thoroughly knows his merchandise, and how it should be used, is a refreshing visitor and quickly commands Respect.

Respect is closely akin to Confidence.

Respect for the salesman + respect
for his wares = Confidence.



Confidence + continued effort = Orders.

Orders + customer satisfaction = A Successful
Salesman.

"Rely on Everett" Book Papers have the Respect of paper buyers who want dependable quality merchandise at moderate prices

Their use promotes Customer Satisfaction.

They are sold only by paper dealers of standing and merit.

You should sell them with every confidence in the result.

* A coined word, combining:
Maxim—a rule or precept sanctioned by experience and relating especially to the practical concerns of life.
Axiom—an established principle in some art or science.

EVERETT PULP AND PAPER CO.

Home Office and Mills: Everett, Washington

Sales Offices: 244 California Street, San Francisco . . . 802 Washington Bldg., Los Angeles

Wood Room

(Continued from page 40)

is believed that the former method would be preferred because, among other reasons, there would be some danger from careless operators letting the log down against the chipper disc with too much force. Even now, where wood is dropped down against a chipper blade from above, the effect is not so good for the chipper where the wood comes intermittently.

Cordwood is a fairly ideal form for handling wood. The size of the piece makes it a convenient unit for a man to handle. Production of cordwood is a simple matter. A man needs only an axe to set himself up in business. There is no terrific overhead in expensive equipment comparable to our modern logging camps. The small individual pulpwood operation enables the ground to be cleaned up thoroly, improves the chances of reforestation, provides more stabilized community payrolls.

But a serious disadvantage of cordwood is the uneven sides of the pieces. This defect evidences itself most in the chipping operation where poor chips come from the uneven side and in the aggregate a considerable loss of wood is involved.

In barking, many losses are now being countenanced which are wholly unnecessary. In the first place, there is a tendency to overload the barkers. The pulp mill superintendent keeps calling for more wood, and if the barkers are the bottleneck in the wood room, the wood room foreman resorts to speeding up the barkers. He shouldn't have to speed up. The barkers can not do their work properly if speeded up too much. It would seem to be much better slightly to enlarge the investment and put in one of two more barkers.

Proper Knife Speed

In the ordinary barker, I have found that by removing four of the knives much better work is obtained. A certain knife speed is necessary in order to make clean cut chips, so that merely to slow down the barkers is not the proper remedy. Taking out four knives maintains this proper knife speed, but reduces the total number of knife cuts per minute, which is the object sought. Too much speed on the barker tends to pull the stick of wood away from the man. The result is that a lot of good wood goes into the hogged fuel conveyor with the bark and, worse yet, too often a couple of fingers.

Delivery of good chips does not rest alone with what is done at the chipper. The continuity of supply, the kind of wood fed into the spout, these and other factors are equally as important as the set and sharpness of the knives. Further, not all wood will chip in the same manner. The experienced wood room man can tell pretty well how his chippers are running, merely by their "song." A difference can be noted between chipping Western Hemlock and Sitka Spruce. Woods native to the Eastern part of the continent do not chip in the same fashion as do the faster growing woods on the Pacific Coast.

The first chips off a stick of wood are small, this because the knife hits the wood at a considerable distance from the bed plate. This condition prevails for a moment until the revolving knives are getting a full bite at the piece of wood—but in that moment a lot of wrong sized chips have been made. At the end of the stick more chips of improper size are produced, this time because the rapidly revolving knives tend to pull the whole piece of wood thru as it gets down to the

last bit. We find in this situation of poor chips at the beginning and end of each piece an argument for chipping larger pieces. The whole log is the largest piece, and chipping the whole log may yet be the answer.

The object of the screens is, of course, to sort out for the digesters chips of even size. The screens hold jurisdiction only as to size and if some of the wood room operations ahead of the screens have fallen down, one can not look for the whole remedy at this late stage. But with screens there is once more the tendency to err on the side of omission rather than commission and to provide insufficient equipment to really do the work. The result is that in trying to put all the chip requirements across the screens, the pitch is raised until too many good chips are being sent into the recrushers to be hopelessly mutilated. The recrusher is evil enough without being overfed.

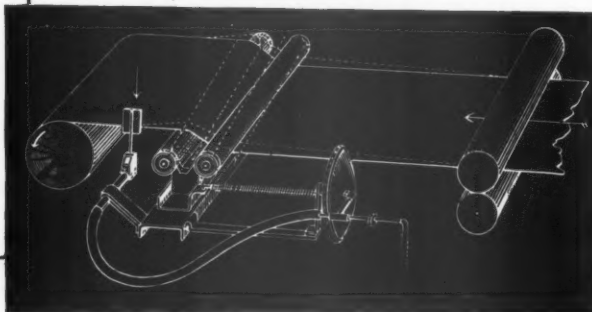
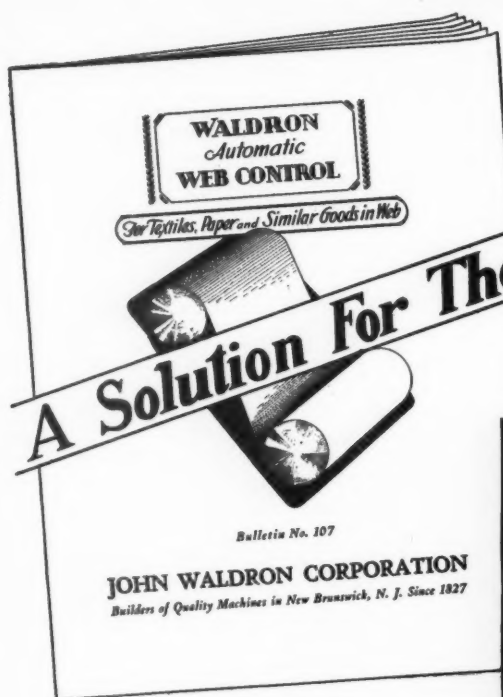
Since one of the two chief aims of the wood room is to remove dirt and foreign matter, it might be wise to inject some operations in the wood room not now employed. It might be of distinct advantage to wash the barked slabs before the chippers, and then again wash the chips after the screens. Knots are heavy and many of these trouble makers could be sunk out at this stage. It might also be well to look to the employment of centrifugal force after the screens to separate the heavy knots.

Tons of Knots

This matter of knots is surprising. To test out my theories on one job, six men were put to work picking knots out of the chip conveyor leading to the digester bins. Each man picked about a half a cord of knots a day, and they probably didn't begin to take out the total supply. One might figure at first glance that six extra men on the crew would offset any advantage that might be gained in three cords of knots in the digesters. It is not intended to suggest that the way to do is to put hand pickers on the conveyors. The knot elimination could be accomplished mechanically more effectively. What is important is that with the knots eliminated there would be room for several more cords of good wood in the digesters each day. The screens would not have to handle this extra. Valuable equipment would not have to handle useless material.

There is another point that ought to be mentioned here. When chips rest in storage for even a day they will dry out a bit. While they may have been perfect chips when they went across the screens, their physical qualities have changed by the time they are ready to go to the digesters. Some of the dirt and sawdust clinging to the chips has loosened up. There ought to be one last cleaning before the pulp cook is asked to make pulp out of dirt. This could be accomplished by a final screening at the digester mouth. Some experiments made have indicated that a suction fan pulling thru a screen past which the chips were dropping into the digesters would remove a surprising amount of dirt and sawdust.

As outlined in the beginning of this article, the subject of wood room improvement is entirely too large to be covered in a single discussion. It is sufficient to point out that in the experience of the writer it has been demonstrated that by careful attention to all parts of the wood room, the log measure requirement for a given volume of pulp has been reduced to 65 per cent of the original. This possible saving in wood should be itself sufficient argument for more study in the wood room. The decreased dirt count is still further profit.



Diagrammatic layout of the Waldron-Dickhaut Automatic Web Guide, showing the method of cutting rolls to guide the web.

A Bulletin for the + +

The increased widths and speeds of webs that are now being processed and converted has brought about correspondingly increased difficulties in holding the material to its correct course in the processing operation. Manually controlled guides and tension devices cannot satisfactorily cope with present operating conditions. Uneven travel of goods results in poor bundles, while improper tension has a disastrous effect upon the finished goods.

Superintendent and Production Manager

The Waldron-Dickhaut Automatic Web Guide completely meets the new requirements, supplying the need for proper web control and positive assurance of goods following their anticipated center line course. It regulates the guiding automatically, eliminating the necessity for constant adjusting. It is based upon the principle of changing the angle of the lead roll thereby guiding the web while maintaining a uniform surface contact across the web and without danger of injury to the edge of the goods.

The bulletin illustrated and just issued has been prepared by engineers who have devoted years of study to the perfection of this successful method of control. It is a highly instructive discussion on the problems involved and contains full description, specifications and illustrations of the various types of Waldron-Dickhaut Automatic Web Guides, also Waldron Automatic Tensions that are proving so successful in paper and textile plants. We will gladly send it to any superintendent or production executive who is interested in securing a more uniformly finished product, a more uniform bundle, and the elimination of waste.

+ SIMPLY MAIL THIS COUPON FOR YOUR COPY +

JOHN WALDRON CORPORATION
NEW BRUNSWICK, N. J.

Send me without obligation your new bulletin describing
Waldron Automatic Web Control.

Company Name and Address.....

Attention of

Position.....

When writing to JOHN WALDRON CORP. please mention PACIFIC PULP & PAPER INDUSTRY

S · A · F · E · T · Y

FIRST — LAST — ALWAYS

The best safety device known is a careful man

Pacific Coast Division
Pulp and Paper Section

NATIONAL SAFETY COUNCIL

ROBERT H. SCANLON
Regional Director
Powell River Co., Ltd.
Powell River, B. C.

IF there is one subject on which all should have the right to speak it is the subject of SAFETY. Here are no party lines, no competition between different units of an industry, no political or industrial boundaries. The underlying cause is humanitarian, against which only a niggardly soul can argue. The dividends are tangible, factor enough to align the coldest cash customer. PACIFIC PULP AND PAPER INDUSTRY claims a right to urge the cause of SAFETY.

It has been amply demonstrated that the perfection of mechanical safeguards disposes of only a straggling few per cent of the causes of accidents. The great bulk of accidents are traceable to carelessness, a dullness of mind upon the part of the individual. The great work to be done in SAFETY it seems, therefore, is to arouse and keep aroused a permanent safety consciousness.

To achieve this SAFETY alertness calls for a sincerity of effort on the part of management to demonstrate convincingly to the rank and file that SAFETY is just as much a matter of vital concern as the introduction of operating economies, of constant study of the plant's cost sheet. The rank and file needs to know, further, that the management is really interested in seeing the cause of SAFETY extended beyond the factory gate, into the homes, the schools, on the street.

Some creditable work has been done in Pacific Coast mills, individually, in groups of mills under one management, in groups of mills in the same locale. The

basic idea of expanding the work beyond a single mill is to take advantage of the experiences and practices of others, to stimulate effort by contest, to organize the work on an efficient basis and place it in the hands of experienced SAFETY directors.

Whatever argument may be advanced against exchange of ideas on other matters, such as studies on costs, technical information, operating practices, sales, does not hold true in enlarging upon SAFETY activities. The benefits extend beyond the mere building up of a safety conscious personnel in one's own organization. The SAFETY efforts tend to build up a SAFETY conscious community, a SAFETY conscious area—both industrially and geographically—so that the entire reservoir of employes is thinking SAFETY. To the individual mill the benefits are definite. To the better mills there tends to gravitate the better class of permanent employes. To the industry as a whole the benefits are also great.

No plea is made here for any particular form of organization. That, it is felt, is a question for the mills to decide. But it is not amiss to point out that general expansion of the work opens up new fields of ideas, tends to draw the best talent toward directing the work, builds a greater interest thru stimulation by comparison.

And, finally, the work of SAFETY, if it is to accomplish real and not superficial results, rests in the ultimate upon the genuine interest of the man at the top. It is not a job that can be dismissed to a subordinate entirely.

STATEMENT OF ACCIDENT EXPERIENCE—MARCH, 1930
Mills in State of Washington

COMPANY—	Hours Worked	Total Accidents	Frequency Rate	Days Lost	Severity Rate	Standing
Cascade Paper Co.	39,568	0	0	0	0	1
Puget Sound Pulp & Timber Co., Fidalgo Division	25,368	0	0	30	1.183	2
Pacific Straw Paper & Board Co.	17,720	0	0	26	1.467	3
Shafer Box Co.	12,480	0	0	30	2.404	4
Inland Empire Paper Co.	62,064	1	16.1	9	.145	5
Everett Pulp & Paper Co.	85,552	2	23.4	6009	70.238	6
Rainier Pulp & Paper Co.	66,172	2	30.3	12	.181	7
Columbia River Paper Co.	62,947	2	31.8	805	12.789	8
Grays Harbor Pulp & Paper Co.	86,130	3	34.9	54	.627	9
National Paper Products Co.	95,542	4	41.9	30	.314	10
Washington Pulp & Paper Corp.	110,798	5	45.1	50	.451	11
Fibreboard Products Inc., Sumner	19,724	1	50.7	5	.254	12
Crown Willamette Paper Co.	420,838	23	54.6	400	.951	13
Union Bag & Paper Power Co.	67,568	4	59.2	269	3.981	14
Puget Sound Pulp & Timber Co., San Juan Division	30,960	3	96.9	77	2.487	15
Fibreboard Products Inc., Port Angeles	45,984	5	108.7	79	1.718	16

The following mills not reporting: Longview Fibre Co., Pacific Coast Paper Mills, Tumwater Paper Mills—not in operation.

??? Port Mellon ???

Pumping equipment and other mechanical units for use of the Vancouver Kraft Mills at Port Mellon, Howe Sound, B. C., arrived recently and will probably be installed during the present month.

Construction work at the Port Mellon plant, however, has been suspended temporarily and official news relating to the company's future plans is not available.

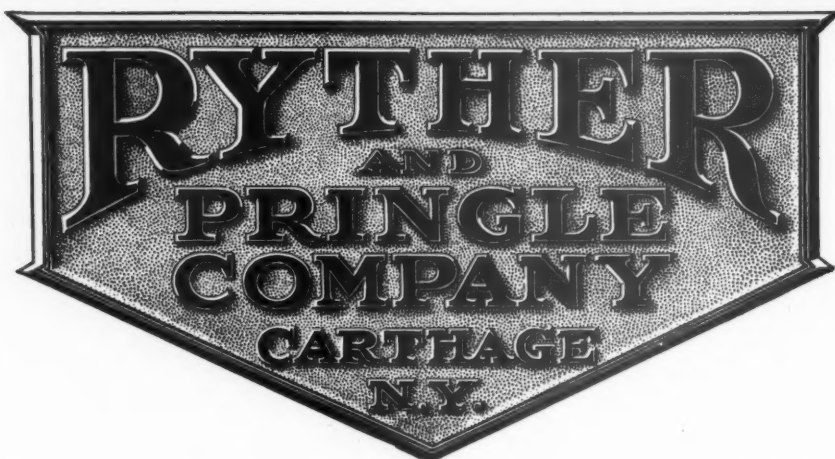
The sawmill to be operated in connection with the kraft plant and which is to have a daily average capacity of about 100,000 f.b.m. daily is virtually completed,

but the reconstruction of the kraft mill is only partly carried out.

Those familiar with the Vancouver Kraft program say that the depression in lumber may be partly responsible for the suspension of building.

Beckwith Looks Over Denver

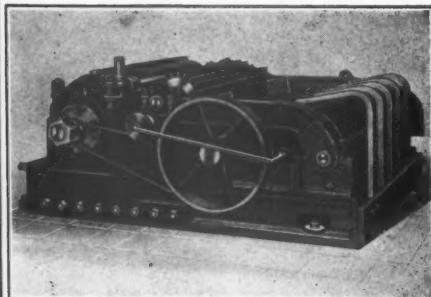
C. W. Beckwith, manager of the Coast branches of Carter, Rice & Company, stopped off in Denver for a day while on his way to Boston for a visit with the home office.



RYTHER SHREDDER



DISCHARGING SHREDDED
STOCK DIRECTLY INTO
BEATER TUB ELIMINATING
CONVEYING SYSTEM.



SAVES FURNISH TIME
SAVES BEATING TIME
SAVES POWER

The shredder installation described reduces the return board broke from two machines and also prepares a liner furnish, consisting of groundwood books and papers. The shredder is mounted on an elevated platform and driven by a thirty horse power motor. This setup is able to make a two thousand pound furnish in twenty minutes. Excessive peak loads on the beater drive are eliminated because the stock is delivered into the beater tub in uniformly fine pieces which readily absorb water and are quickly repulped.

Please ask for Bulletin 627

CANADIAN INGERSOLL-RAND COMPANY, LIMITED
10 PHILLIPS SQUARE, MONTREAL, P. Q.

When writing RYTHER & PRINGLE Co., please mention PACIFIC PULP AND PAPER INDUSTRY.

New Types
New Models
New Machines

EQUIPMENT

Manufacturers of, and dealers in, equipment used by pulp and paper mills, board manufacturers, converting plants, paper merchants, or any other branch of the industry may make their announcements in this department.

New Dealers
New Branches
Appointments

Barking Drums

Fibre Making Processes, Inc., Chicago, has just issued an interesting and attractive booklet entitled "Guaranteed Barking Capacity." The booklet is profusely illustrated with actual photographs and blueprints. One of the most interesting features of the book is a table and curve showing the number of pieces of wood of different sizes required to make a cord.

G. E. Produces New Type Quiet Gears

Fabroil gears have been developed by the General Electric Co. to fill the definite need for a very elastic, strong, and long-wearing gear material that will smooth out and absorb the impact and acceleration loads which inevitably fall on gear teeth.

No matter how carefully the gears in an all-metal gear train are cut and meshed, there are always minute inaccuracies of tooth form and spacing which set up relatively high impact and acceleration stresses in the teeth as they enter or leave contact. This is particularly true in the case of high pitch-line velocities encountered in modern, high-speed machinery. It is these impacts between metallic gear teeth which cause gear noise and result in the high unit stresses that shorten gear life.

The highly elastic properties of Fabroil, which is many times as elastic as any metallic gear material, coupled with its strength, equal to that of the best cast iron, enable it to absorb and smooth out the impact shocks inherent in gear drive, thus eliminating practically all of the gear noise and greatly reducing the shock stresses.

General Electric Co. cites three advantages in the use of Fabroil gears. First, the quietest gear drive possible is obtained; second, the life of the entire gear train is greatly lengthened; third, maintenance expense of the driven machine is reduced because of the cushioning effect and absorption of shock loads.

Salem Mill to Install Additional Boiler

Threatened with action for maintaining a cinder nuisance the Oregon Pulp & Paper Company at Salem, Oregon, has agreed to correct the situation by the installation of an additional 180 H. P. boiler. The added steam capacity will permit easing up the load on the other boilers, thus resulting in cinder reduction as well as increased steam and power efficiency.

Griffith Rubber Mills to Expand

The Griffith Rubber Mills, of Portland, plan to hurry up the installation of a roll covering plant in Seattle, owing to the great demand for rubber products by the pulp and paper mills on the Pacific Coast. Further expansion into Washington or British Columbia is anticipated which will no doubt affect the proposed plans for enlarging the Portland plant.

This company's patented porous top press roll is experiencing ready acceptance in the field, it is announced by the company's plant manager, U. A. Keppinger. These rolls are being installed by both Crown Zellerbach and Leadbetter mills on their largest machines here on the Coast.

Bingham Pump in New Factory

The Bingham Pump Co., of Portland, is now established in its new \$100,000 daylight factory occupying a half block bounded by East Seventh, Main and Salmon Streets, a move necessitated by increased demand for its equipment.

Bingham Pump Co. has installed in its new plant the most modern type of precision machine tools, an elaborate testing department capable of testing pumps up to a capacity of 20,000 gallons per minute. Special electrical testing equipment has been supplied by the General Electric Company which is used to accurately check each pumping unit under operating conditions before it is shipped.

Altho Bingham Pumps are being used extensively in mining operations, industrial plants, irrigation and drainage districts, a large percentage of their business is now derived from pulp and paper mills. At the present time contracts are being completed on all of the pumping equipment for the \$2,500,000 Fir-Tex Mill at St. Helens, Oregon, and the new \$4,000,000 pulp mill of the Puget Sound Pulp & Timber Co. at Everett, Washington. Recently this company entered into a contract with the Phoenix Utility Co. for all of the large dewatering and station pumps required in their new \$10,000,000 hydroelectric development for the Northwestern Electric Co. on the Lewis River, Southwestern Washington.

The Bingham Pump Co. has, during the last few years, developed many pumps specially for paper mill use that have had recognition by leading engineers in all sections of the country. Recently, a New York engineering firm, Hardy S. Ferguson & Co., awarded a large order of pumps to this Pacific Coast factory. At the present time the Bingham company has several other large contracts pending with Eastern engineering firms which they expect to close in the near future.

The Bingham Pump Co. has had a continued steady growth during the last nine years, being organized in 1921 by R. V. Bingham, who now heads the organization as president and general manager.

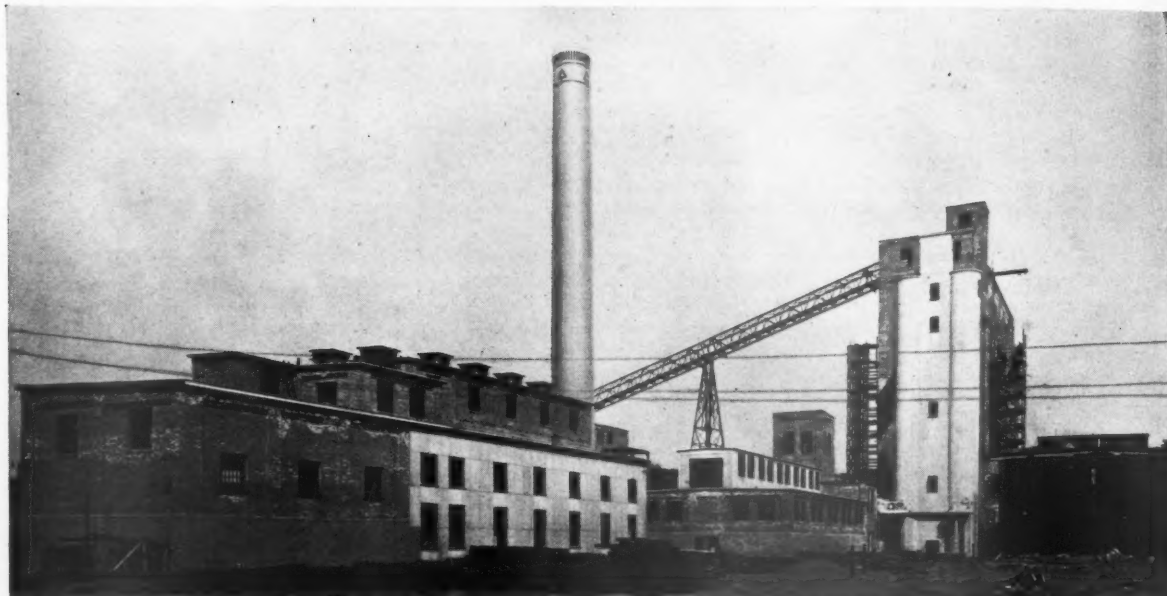
Tractors Take Risk Out of Roll Handling

The comparative ease with which Elwell-Parker Electric Tractors lift a 3,000-pound roll of news-print or a five-ton load of flat sheets and transport them at a saving of both labor and risk of life, is making them an increasingly important piece of mechanical equipment in the modern pulp and paper mill.

Elwell-Parker Tractors are designed in many types to fit any material handling need of the mill and are electrically operated at a cost which is almost negligible.

Hooker Moves Executive Offices To New York

Effective May 1 the Hooker Electrochemical Co. announces that its executive and sales offices will be located at 60 East 42nd Street, New York City. The company operates plants at both Niagara Falls, N. Y., and at Tacoma, Washington.



Typical of the finest construction throughout the entire plant is the chemical department of our new BLEACHED SULPHITE mill soon to be in operation. + Here are shown the bleach liquor building, sulphur storage and burner rooms, acid towers and acid storage tanks

Puget Sound Pulp & Timber Co.

EVERETT, WASHINGTON

Manufacturers of Bleached and Unbleached Sulphite Pulp from the famous forests of the Pacific Northwest, for domestic and cargo shipments

Bird Develops Closed Water System

For many months the Bird Machine Company has been conducting an intense research on the handling of white water, in an effort to develop a thoroly modern closed system.

This research, carried on in actual mills under everyday conditions, has now reached a point where the Bird Machine Co. can present recommendations for a complete closed system which it is ready to prove in every detail. These recommendations are the result of an attack on the white water problem from an entirely new angle, and a redesigning of the Bird Save-All.

A full description of the system, with a detailed flow diagram showing its application in a typical mill, is presented in the current issue of "The Stuff Box," Bird Machine Company's house organ.

"The new system is of real importance to every mill," the Bird Machine Company announces. "Applied in part, the idea cannot fail to bring about a substantial saving. Applied completely, its effectiveness in recovering fibre, in retaining heat, in saving power and preventing slime, is practically 100%. If you are now using Bird Save-Alls, the new system will allow you to obtain greater benefits from them. If you have not been using Bird Save-Alls, we believe the system will give you something to think about; it offers operating economies that you will not care to neglect."

Willamette Iron Adds Pulp-Paper Equipment

The Willamette Iron & Steel Works, of Portland, under the direction of Manager Ray Smythe, is taking active steps to widen its field of usefulness in the growing pulp and paper industry on the Pacific Coast. Arrangements have recently been completed to manufacture or sell several more types of equipment.

While H. W. Guettler of Fibre Making Processes Inc. was on the Pacific Coast recently, arrangements were concluded whereby the Willamette organization will manufacture and sell the Fibre barking drums and other items. Willamette manufactured two of these drums for installation in the new 160-ton kraft pulp mill of the Union Bag & Paper Power Corporation at Tacoma.

Mr. Smythe is enthusiastic over the prospects for the Stadler Coarse Screen, which his company has now arranged to handle. The Stadler screen, Mr. Smythe states, is used for knotting purposes and has a tremendous capacity. It is a well designed, self-contained unit, direct driven, and should appeal to superintendents of both sulphite and sulphate mills because of its capacity and easy maintenance.

The Willamette company has also an arrangement with the Appleton Machine Company to manufacture flat screens, chippers and barkers. The Appleton company has their selling agent on the Coast, with whom the Willamette company cooperates.

The Willamette company also goes into the field of forged and hammer welded pressure vessels, having arranged with the M. W. Kellogg Company to represent this class of equipment. The rotary digesters used in the sulphate mill of the Crown Willamette Paper Company's mill at Camas, Washington, are of Kellogg make.

Altho several hundred steam accumulators have been sold in other parts of the country, no installations have as yet been made on the Pacific Coast, but the Willamette company has arrangements to handle this piece of equipment, prepared for the day when steam costs will have been reduced to a tangible item on the Pacific Coast.

The big German organization known as M. A. N., at Gustavsburg, manufacturers of roller and sluice type control gates for stream control, has a working arrangement with the Willamette company. Three such gates were installed recently for the city of Eugene, Oregon.

Among other items turned out by the Willamette Iron & Steel Works are sulphite digesters—of which they have many installations in Pacific Coast mills—the Huffman Hog for reducing hogged fuel, logging machinery, cement mixing machinery.

"We are constantly revising our ideas of equipment," Manager Smythe states, "making improvements in design and trying to look forward to what will be required in the future. In the flat screens which we delivered recently to the new Olympic Forest Products Company mill at Port Angeles, Washington, we incorporated our cam roller followers which have proved successful. Each screen was a finished piece of mechanism when it left our shop, for we are not satisfied with the design of a piece of equipment unless we feel that it cannot be better."

Oliver-United Filter Bulletin

The value the pulp and paper industry places on filters is shown by the large number of recent installations for a variety of purposes. Altho the first experimental Oliver United Vacuum Filter for use on pulp was not built until 1921, by July 1929 there were over 600 units installed and operating in pulp producing countries throughout the world.

Bulletin 201, issued by the Oliver United Filters Inc. is an interesting and instructive booklet depicting the many uses of the company's products in the pulp and paper industry. There are many illustrations of actual installations as well as diagrams showing methods of hook-up.

Paper Makers Chemical President Visits Coast

President W. J. Lawrence of the Paper Makers Chemical Co. was a visitor on the Pacific Coast last month. He not only inspected the new plant that the company established at Portland last year to serve the growing pulp and paper industry on the Coast, but he also visited a number of the Coast mills in company with Alex Duncan, who is in charge of the Pacific Coast territory for the company.

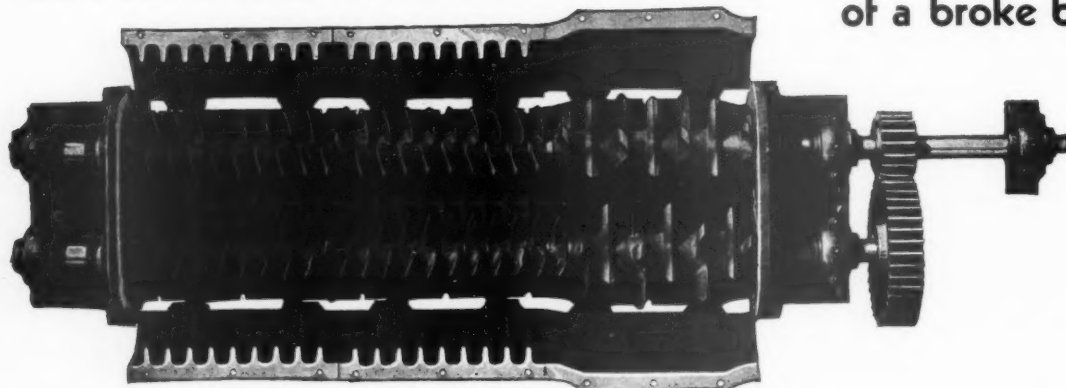
The company's plant at Portland is now operating at good capacity and is proving to be a real measure of service to the Coast mills in the production of rosin size. The city of Portland is to cut a street thru the industrial district close by the chemical plant and the company will, during the summer, improve its plant by paving a road, building an attractive industrial fence about the property and planting trees, shrubbery and lawn.

I. P. Building New Southern Kraft Mill

International Paper Co. has commenced construction on a 200-ton kraft paper mill at Panama City, Florida, on the Gulf of Mexico, 140 miles east of the new Mobile, Mississippi, kraft paper mill of the Company which started production last September. With the completion of the Panama City mill, the company will have six mills in southern United States with a capacity of 1,000 tons a day of southern kraft paper and board, in addition to the capacity of the kraft paper mills of its Continental Paper & Bag Corp. in northern United States.

If It's BAKERMADE—Eventually it Costs Less

▼
IMPROVED



**BAKER-VOITH
KNEADER**

Repulps broke, trimmings, shavings, waste, etc., with half the labor and half the power of a broke beater.

Defibers stock by a continuous rubbing action that preserves the original length and strength of the fibers.

Completely Timken equipped.

Economical in power consumption.

Impellers of high quality, special alloy steel, individually mounted and metallurgically balanced to equalize wear in light and heavy duty sections.

New shaft design positively free from alignment troubles.

Casing hinged and bolted for easy access.

Capacity 12 to 16 tons per day.

Saves power . . . saves labor . . . saves waste . . .

Quickly repays its cost.

Write for complete details.

The Baker Corporation

SINCE 1881

Saratoga Springs, N. Y.

A Half Century of Dependability

The Future of Rayon in Japan

By GORDON W. LAND
A. Cameron & Co. Ltd., Kobe, Japan

ALTHOUGH industrialists fear that the future of many Japanese industries will not be at all bright now that the gold embargo has been removed, no fears have been expressed regarding the future of the rayon market and industry. For this feeling of confidence there are two reasons: (1) the remarkable elasticity of demand and supply in this industry, and (2), the fact that the expected effects of removing the gold embargo have already been discounted.

In Japan production until four or five years ago was only about 2,000,000 pounds a year. But for 1930 production is anticipated at 32 to 33 million pounds.

Demand has usually held level with supply. Production in 1929 reached 27,000,000 pounds, but considering stocks known to be held by makers at the end of the year, there is good reason for believing that 27,000,000 pounds was consumed last year. Compared with 16,400,000 pounds produced in 1928, the increase last year was 64.5%. Statistics for previous years show a similar growth, a condition which does not exist in any other industry at this time.

Foreign Demand

Accordingly, if production is stimulated by the usual increase in consumption in 1930 we should see the Japanese mills making 40,000,000 pounds. Even if there be some restrictions in sales, production this year may be estimated at a figure which will meet the total demand.

The foreign field for rayon manufactures is extensive, and if foreign demand for Japanese rayon weaves does not fall off Japanese weavers will use more and more rayon every year. Compared to other textiles there is a larger margin of profit for rayon weavers largely because there has been little decline in rayon prices compared to other commodities.

The continued financial depression in the home market is expected to shift demand to lower priced textiles, and rayon will be in increasing popular demand. Therefore, viewed from almost all points the future of rayon consumption is promising.

In 1929 rayon prices fell off by 40% due to anticipations of the losses which might be incurred by the lifting of the gold embargo, and the increasing production at home. But the loss was only temporary and it was soon learned that speculative operations were largely responsible for the heavy decline. This drop in prices had a healthy effect on the industry, however, for manufacturers got a shock, and hastily curtailed their operations, both in production and extensions of equipment. Expenditures were retrenched, and factory organizations were greatly improved. Costs of production have consequently fallen remarkably.

Cotton spinners and woolen manufacturers suffered heavy declines on their raw material stocks, but as the average consumption of raw materials in the rayon indus-

try are low in Japan, Japanese rayon makers sustained only small losses from this cause. The cost of producing rayon in Japan may be analyzed as follows:—

Pulp and chemicals.....	40	per cent of the total
Labor	20	per cent of the total
Power and heat	10	per cent of the total
Upkeep and repairs.....	10	per cent of the total
Operation, including depreciation	20	per cent of the total
		100 per cent of the total

The rise in exchange consequent on the announcement that the gold embargo would be lifted affected only the prices of pulp and some chemicals. Most of the chemicals used are made in Japan, only small quantities of imported glucose being needed. In this point too, the rayon industry stands in a very different position from the cotton and woolen industries.

If rayon is more or less stabilized thruout the world, Japanese makers stand in a good position to control the oriental markets, as production costs are gradually falling, and consumption is steadily increasing.

Therefore if there is no reckless overproduction, the future of this Japanese industry is safe, even after the gold embargo is abolished and the financial depression continues unabated.

Pacific Coast Pulp Is Okeh

Altho Pacific Coast wood pulp as a commodity has only been on the market about five years and has scarcely established itself, it is meeting with excellent reception in the fine paper mills of the Midwest and Atlantic states. The following statement from W. C. Wing, Jr., treasurer of the Fox River Paper Co., Appleton, Wisconsin, is an excellent testimonial:

"We, ourselves, were greatly surprised when we learned by actual experience that Western pulp was comparable in all respects to any foreign or domestic pulp on the market, and we are tremendously enthusiastic over its future possibilities."

Cascade Paper Mill In Receivership

The 50-ton book paper mill of the Cascade Paper Co. at Tacoma, Washington, has ceased production. D. J. Young, of the Bank of California, Tacoma, has been appointed receiver. No official statement regarding plans for the future had been made at the time of going to press. The Cascade mill was built in 1918.

Returns to Floriston

J. B. Thomas, sulphite man who was for some months at the Ocean Falls, B. C., plant of the Pacific Mills Ltd., has now returned to the Floriston, California, mill of the Crown Willamette Paper Company.



The Sulphate Pulp Mill of the Crown Willamette Paper Company at Camas, Washington. Photo by Brubaker Aerial Surveys.

FOXBORO THROUGHOUT

Because they found, from previous experience, the great value of consistent accuracy and dependability in controlling and recording instruments, the Crown Willamette Paper Company have completely equipped their Sulphate Pulp Mill in Camas, Washington, with Foxboro Instruments.

On every important process throughout the mill, one or more of these instruments are installed—Foxboro Automatic Temperature Recorder-Controllers, Recording Thermometers and Recording Pressure Gauges.

Here is a testimonial that we are proud to call to your attention. For all processes in your own mill, where knowledge and control of temperature, pressure, liquid level or flow is desirable, Foxboro can furnish the correct instrument.

Let us demonstrate this to you. Write today to Dept. P. C. for full information.

WESTERN OFFICES:
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San Francisco, 461 Market St.
Portland, Ore., 816 Lewis Bldg.

New York	Dallas
Boston	Detroit
Chicago	Salt Lake City
Philadelphia	Pittsburgh
Atlanta	Cleveland
Tulsa	Rochester, N. Y.
Canada—Peacock Brothers, Ltd., Montreal	

THE FOXBORO COMPANY
Neponset Ave., Foxboro, Mass., U.S.A.

FOXBORO
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THE COMPASS OF INDUSTRY



The Foxboro Recording Thermometer

A Foxboro Recording Thermometer can be used for increased efficiency and profits in a typical sulphate pulp mill on . . .

- Caustic Tank
- Indirect Heater
- Digester
- Condenser
- Bleach Dissolving Tank
- Bleaching Tank
- Pulp Dryer
- Feed Water
- Steam
- Nordstrom Tower

INSTRUMENTS for CONTROLLING, RECORDING and INDICATING TEMPERATURE, FLOW, HUMIDITY and PRESSURE

When writing the Foxboro Co. please mention PACIFIC PULP AND PAPER INDUSTRY

Canadian Exports of Pulp and Paper March, 1930

Canada's exports of pulp and paper in March were valued at \$18,166,294, according to a report issued by the Canadian Pulp and Paper Association. There was an increase in the value of these exports of \$4,618,361 over the February total, but a decline of \$1,090,660 from the total for March, 1929.

Exports of wood-pulp for the month were valued at \$4,704,595 and exports of paper at \$13,461,699 as compared with \$3,567,070 and \$9,980,863 respectively in the previous month.

Details of the various grades of pulp and paper are as follows:

	March, 1930		March, 1929	
	Tons	Dollars	Tons	Dollars
PULP—				
Mechanical	18,645	550,439	13,090	364,150
Sulphite Bleached	32,606	2,411,067	25,254	1,911,072
Sulphite Unbleached	20,749	1,041,300	16,160	812,677
Sulphate	11,416	646,978	14,654	881,210
Screenings	2,786	54,811	5,827	45,184
	86,202	4,704,595	74,985	4,014,293
PAPER—				
Newsprint	225,252	12,918,086	244,167	14,612,542
Wrapping	1,065	111,792	1,569	168,332
Book (cwt.)	3,286	36,639	9,930	84,002
Writing (cwt.)	154	1,038	1,242	10,552
All Other		394,144		367,233
		13,461,699		15,242,661

For the first three months of the year the exports of pulp and paper were valued at \$47,720,569 as compared with \$49,793,094 in the first quarter of 1929, a decline for the current year of \$2,073,525.

Wood pulp exports for the first three months were valued at \$12,195,249 and exports of paper at \$35,525,320 as against \$10,858,275 and \$38,934,819 respectively in the corresponding months of 1929.

Details of the exports for the first quarter of 1930 and 1929 are as follows:

	Three Months, 1930		Three Months, 1929	
	Tons	Dollars	Tons	Dollars
PULP—				
Mechanical	55,240	1,636,261	39,788	1,060,545
Sulphite Bleached	79,041	5,908,479	69,340	5,283,358
Sulphite Unbleached	55,742	2,786,071	43,177	2,257,785
Sulphate	30,466	1,725,276	25,642	2,139,463
Screenings	7,334	139,162	5,827	117,124
	228,023	12,195,249	183,774	10,858,275
PAPER—				
Newsprint	588,229	33,946,754	613,683	37,201,883
Wrapping	3,698	391,109	4,492	488,932
Book (cwt.)	11,367	106,967	23,391	192,587
Writing (cwt.)	475	4,839	1,242	10,552
All Other		1,075,651		1,040,865
		35,525,320		38,934,819

Exports of pulpwood for the three months amounted to 391,963 cords, valued at \$3,608,359 as compared with 341,266 cords valued at \$3,062,888 exported in the first three months of 1929.

Japanese Paper Trade

Imports of paper and paper products into Japan, according to figures published by the Tariff Division of the Department of Finance, Tokyo, dropped from 50,314 short tons valued at approximately \$7,002,319 in 1928 to 39,692 tons valued at \$5,774,205, while at the

same time there was an increase in exports from 89,050 tons to 93,754 tons in volume and from \$11,911,950 to \$12,110,002 in value.

Nearly all classes of paper imports suffered in the general decline, notable exceptions being match papers, which increased from 221 tons to 867 tons and vegetable parchment papers, which increased from 3,614 tons to 4,621 tons. Pasteboard imports for 1929, amounting to 2,110 tons were also greater—by 226 tons.

Paper Production and Sales in Japan

FEBRUARY, 1930

	Production Pounds	Sales Pounds
Printing paper (superior quality)	14,668,863	16,673,138
Printing paper (superior quality)	14,668,863	16,673,138
Writing and Drawing paper	2,501,517	3,418,522
Simili Paper	8,594,325	9,326,977
Art Paper	2,009,613	1,730,918
News Print	47,494,377	44,072,369
Sulphite Paper	1,290,335	1,569,782
Coloured Paper	950,005	1,060,470
Wrapping Paper	11,448,967	10,040,051
Chinese Paper	1,916,324	2,375,554
Board Paper	4,854,971	4,462,761
Sundries	7,043,294	6,723,388
Total	112,449,509	112,449,839

PRODUCTION OF BOXBOARD

FEBRUARY, 1930

Unit—Short Tons

Based on Reports of the U. S. Department of Commerce

	Production	Per Cent of Capacity	New Orders	Unfilled Orders End of Month	Stocks End of Month
1930—					
February	220,269	77.7	217,495	71,721	68,844
January	*233,314	*75.9	*235,390	*76,975	*63,242
First 2 Months	453,583	76.8	452,885		
1929—					
February	228,034	80.4	227,595	87,726	57,398
First 2 Months	476,324	80.6	468,681		

* Revised.

Sitka Spruce Mill Moving Pulp Output

Reports from the Coos Bay district on the Oregon Coast indicate that the Sitka Spruce Pulp & Paper Co., which began production in an unbleached sulphite pulp mill last November, is now producing about 40 tons of pulp daily and shipping it to Japan and to Midwest points.

The plant is a combination lumber mill-pulp mill under one management. C. McC. Johnson, a veteran lumberman of the region, is president, and J. B. Wilt is pulp superintendent. The company claims ownership of large stands of Sitka spruce in the back country, and is using about 95% of that wood in its pulp.

PULP IMPORTS INTO JAPAN—1927-1928-1929

Country of Origin	1927		1928		1929	
	Lbs.	Yen Value	Lbs.	Yen Value	Lbs.	Yen Value
Great Britain	3,299,733	504,556	1,193,199	281,667	3,326,665	681,799
Germany	9,189,200	665,473	3,683,868	288,356	9,510,265	722,482
Sweden	21,748,466	1,760,507	14,684,667	1,156,736	20,978,401	1,482,444
Norway	17,256,068	1,804,667	15,737,465	1,517,674	32,268,534	3,286,737
United States	7,243,470	593,377	15,192,669	1,289,908	32,589,598	2,317,995
Canada	95,427,066	6,080,262	105,537,600	6,250,857	78,353,467	4,625,714
Others	6,785,597	521,317	9,079,999	669,787	4,486,003	368,164
	160,949,600	11,930,159	165,109,467	11,454,985	181,512,933	13,485,335

Note—Normal exchange of yen is about \$.50.



KENWOOD TANNED BOARD FELTS HAVE A LONGER SERVICE LIFE ▼ ▼ ▼ ▼ ▼ ▼ ▼

With the necessities imposed by modern papermaking practice, the increased life of Kenwood Felts is an attractive economy feature. This greater potential service is attributed directly to the patented Kenwood Tanning processes. These processes do not merely color the felt but actually tan the fibre so that it withstands the deteriorating effects of acids.

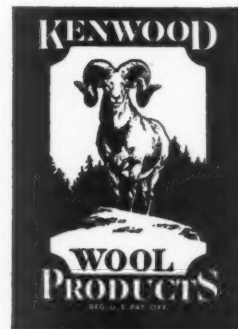
The modern Kenwood Tanned Felt offers many advantages which include greater openness, improved surface, increased strength—all of which provide utmost water removal at minimum cost per ton.

Kenwood pioneered the one sided board felt. This same research service developed and perfected the Kenwood Tanning processes. A third major development is found in the modern method of yarn construction which, although adding greatly to the strength and water removal properties of the felt, does not increase the size nor weight of the yarn.

F. C. HUYCK & SONS

KENWOOD MILLS, ALBANY, N. Y.

KENWOOD MILLS LTD., ARNPRIOR, ONTARIO, CANADA



When writing to F. C. HUYCK & SONS please mention PACIFIC PULP AND PAPER INDUSTRY

**Set-up
Folding
Corrugated
Solid Fibre**

BOARDS and BOXES

A department for interests allied
with the pulp and paper industry

**Board
Mills and
Paper
Converters**

Box Makers Perfecting Convention Plans

Added touches to the program for the sixteenth annual convention of the Pacific Coast Paper Box Manufacturers Association were to be made at a meeting of committee chairman to be held in Seattle on May 17, following which the committee heads planned to go to Victoria, B. C., to complete details. The gathering, which, it is expected, will be attended by at least one hundred members of the trade and their friends, will be held at the Empress Hotel in the latter city June 23, 24 and 25.

The tentative program, as discussed at the Portland and Seattle boxmakers conference held last month at Centralia, Wash., is as follows:

Monday Morning—9:30

Call to Order Charles Ruble, President
Address of Welcome Canadian Government Official
Response Charles Ruble

Reports of Standing Committees Appointed at Del Monte.
PAPER BOXES—THE VALUE OF ADVERTISING.

By C. B. Kerr and W. J. O'Donnell.

Appointment of Committees.

General Announcements

HOW TO RETAIN THE CONFIDENCE AND RESPECT
OF CUSTOMERS—By Russell Barker.

Open Forum.

Monday Afternoon

Golf Tournament.

Dinner-Dance in Evening.

Tuesday Morning—9:30

TRADE PRACTICES AND RULES OF THE INDUSTRY,
By Howard P. Beckett.

MY IDEA OF A PRICE CUTTER AND HOW TO MEET
THAT CONDITION—By W. D. Grigsby.

Open Forum.

Tuesday Afternoon

Golf Tournament.

Dinner-Dance in Evening.

Entertainment.

Wednesday Morning—9:30

WHY A BOXMAKERS ASSOCIATION,

By A. J. Schoephoester.

Report of Committees.

Election of Officers.

Choosing of Next Convention City.

WHAT CONSTITUTES A PROFIT AND WHY,

By F. V. Simpson.

Open Forum.

Wednesday Afternoon

Concluding Golf Tournament.

Dinner-Dance and Entertainment.

Awarding of Golf Trophies.

Box displays tending to create new markets, with an award for the best display, will also be a feature of the convention. The exhibit committee is composed of David S. Sahlein, C. B. Kerr and R. Warner.

Printed programs, embodying such additions and changes as may be made at the May conference, will be ready for distribution shortly before the convention.

In accordance with arrangements being worked out, the California delegation will spend Saturday morning in Portland as guests of the local boxmakers. About noon they will resume their journey north, to be joined in Seattle in the evening by Washington and Oregon delegates. From here on the trip will be made by boat.

The convention will unofficially open Sunday after-

ANNUAL MEETING Pacific Coast Paper Box Manufacturers Association

VICTORIA, B. C.
June 23, 24 and 25

noon, when members renew acquaintances on the greens at the opening golf tournament. Sunday evening's program will be under the direction of the Calcutta pool committee.

Plenty of social activities for the ladies will be provided, promises Rufus C. Holman, association vice-president.

Boxed by Hollywood

Good boxes give self confidence to the goods within. Open a pretty box and listen to the merchandise speak up and say good things about itself and the house from which it came.

That's the message put across in the latest circular letter-folder put out by C. B. Kerr and his Hollywood Paper Box Co., at Hollywood, California. Advertising in the Sunday rotogravure section of Los Angeles papers is backing up Hollywood's sales talks on "Box It Better".

A note of optimism for general industrial conditions in Southern California, for the current year is contained in the report of the Hollywood Paper Box Co., for the first three months of 1930, showing an increase in sales of 30% over the corresponding period for last year.

The sales for the first three months of 1930 were \$197,098.83, an increase of \$46,127 over the same period last year, when they amounted to \$150,971.83.

Deline Out Again With New Designs

The Deline Manufacturing Co. of Denver is coming out with new designs in boxes and other items which heretofore have not been attempted. New lines are baskets having imported tops, some with crepe paper pictures and others in similar unique illustrating, in embossed work. The Godey prints used in boxes for some time have been met with great demand and their use will be increased.

In the Denver trade area it is reported that Pak-Tite containers for ice cream are enjoying a heavy sale and are making great inroads into the sale of the old time paper cartons.

AVON MUST BE GOOD

to keep its jobs in hundreds
of lumber camps and mills

IN the timber country, Avon has been at work for eight years. It has protected millions of dollars worth of equipment from wear and tear.

Today Avon efficiently lubricates more lumbering machinery than ever. It holds down the toughest jobs in hundreds of lumber mills and logging camps. And it's there to stay.

Lumbering is just one of the many industries where Avon is saving machinery and money. Wherever you need dependable lubrication — call upon Avon.

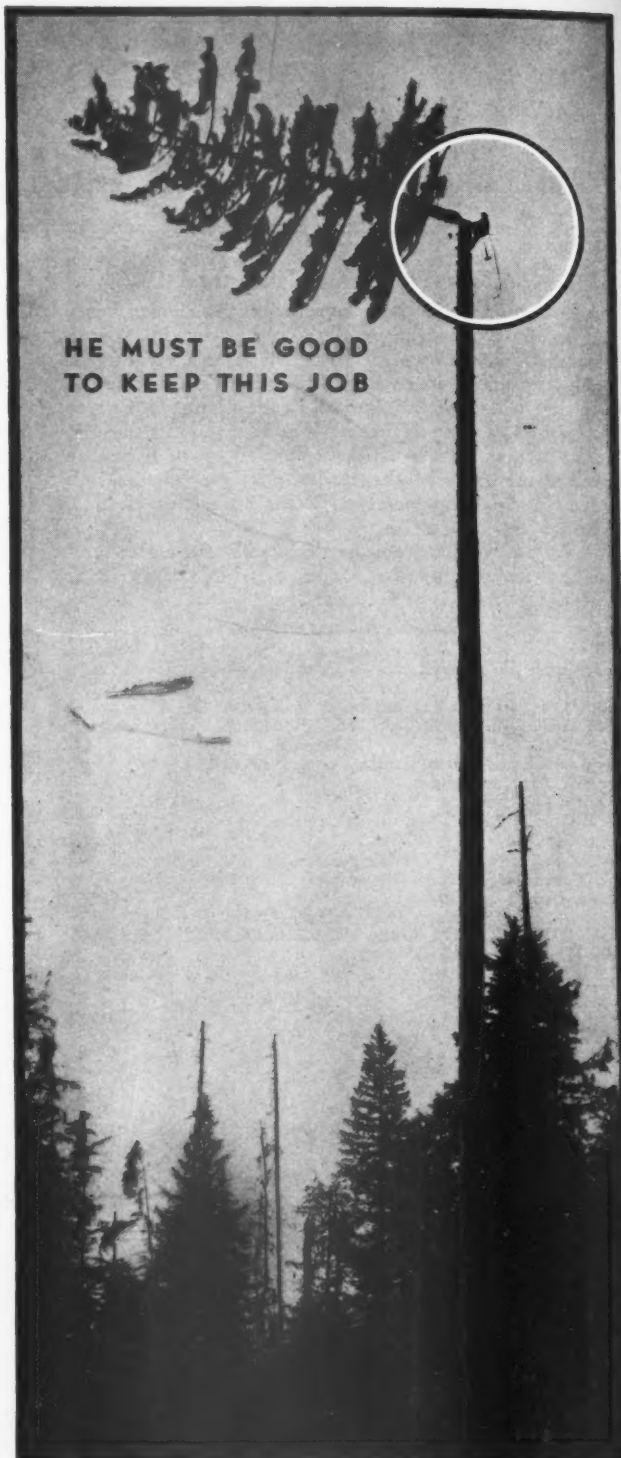
A post-card to Associated Oil Company brings you free, experienced engineer service. Write today and increase the lubrication efficiency of your outfit.

AVON INDUSTRIAL LUBRICANTS

ASSOCIATED OIL COMPANY

79 New Montgomery Street, San Francisco

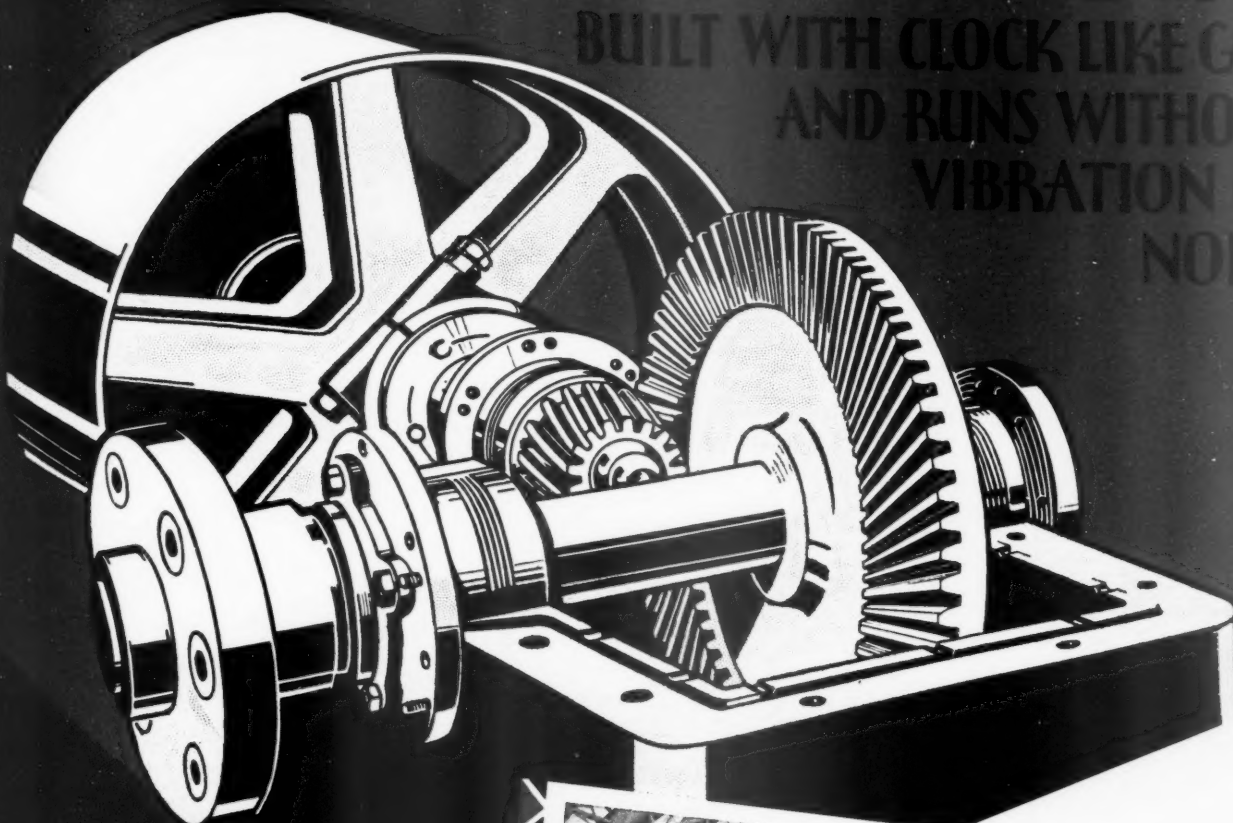
Refiner and Marketer of Associated Gasoline, Associated Ethyl Gasoline, Cyclo Motor Oils and Greases, Burnbrite Kerosene, and Fuel or Furnace Oils



When writing ASSOCIATED OIL Co., please mention PACIFIC PULP AND PAPER INDUSTRY

PERFECTION

BUILT WITH CLOCK LIKE CARE
AND RUNS WITHOUT
VIBRATION OR
NOISE

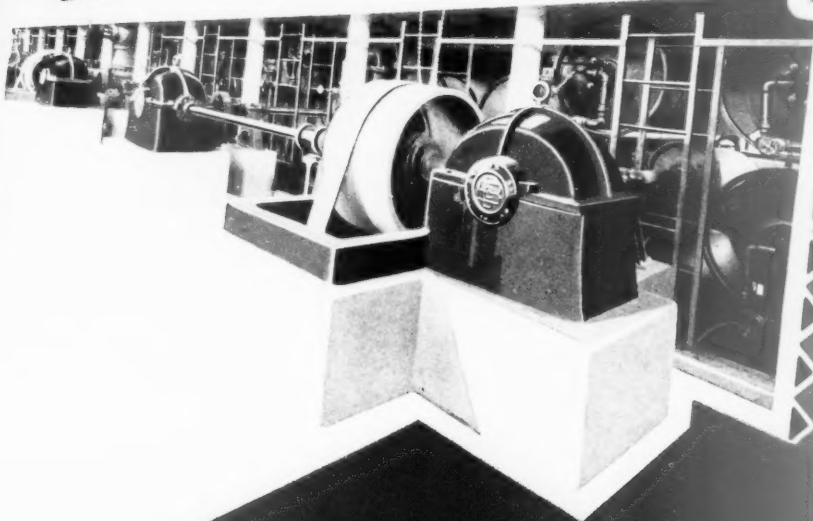


Just ten words — no more — to announce the standard of manufacture, and to describe the operating efficiency of a Black-Clawson Spiral Bevel Gear Drive.

Or, if you prefer,
"the drive incorporating the
B.-C. Spiral Bevel Gears,
leaves nothing to be desired
in mechanical drives"
by a higher mill executive.

To that let us add that the use of a heavy one-piece base to provide rigidity, the use of jigs in manufacture to insure correct alignment, a special splash and flinger system to insure proper lubrication, and Timken's also play a prominent role in the success of this equipment.

SAFETY FIRST



THE BLACK-CLAWSON CO.
HAMILTON, OHIO
EXPORT OFFICE: 15 PARK ROW, NEW YORK CITY

DIFFERENT AND FAR BETTER

A different valve because it embodies a quick change feature that the mills appreciate, and because it is furnished in:

Straightway or threeway type.
Bronze, cast iron, rubber lined.
(Patent applied for)
Standard or spiral pipe drilling.

A far better valve—otherwise why would mills by the score try it out and then order more? Already, although comparatively new, several mills have from 50 to 100 on their lines and a score or more have from 25 to 50.

Send for one or a dozen. If you don't find them better, send them back.



SHARTLE
BROTHERS
MACHINE CO.

MIDDLETOWN, OHIO, U.S.A.

DIVISION OF BLACK-CLAWSON CO. HAMILTON, OHIO

3°

What Is Russia Doing?

Russia—better known these days as the U. S. S. R.—that vast economic and industrial enigma, is now midway in a mammoth five-year program of industrial construction. To those interested in the entire scheme, a wealth of data is offered in book form, obtainable through the Soviet organization in America, The Amtorg Trading Corporation.

The Economic Review of the Soviet Union, published by Amtorg, in its issue of March 15, 1930, summarizes the Soviet Paper Industry.

In substance the aim of the Soviet is to establish a complete independence of imports of paper and pulp and to effect a greater utilization of domestic resources.

"There is still a discrepancy between the needs for paper, based upon the cultural requirements of the country, and production," the Review article states. A fundamental move on the part of the Soviet leaders, is, of course, to raise the great mass of the Russian people from the stagnation of illiteracy impressed by a despotic monarchy, the result of which, as the Review article remarks, is that "With the growth of the national economy and the raising of the cultural level of the U. S. S. R., there has grown up a greater demand for paper, and this, in turn, has served as an impetus for a more rapid development of the industry."

The schedules of the five-year plan of the paper industry estimate that the production of the fifth year will be equal to the demand. The cost of production, it is expected, will be cut 40% by the end of the five-year period, as compared with 1927-28—the first year of the program.

We learn further that in the last two years the Soviet has purchased American machinery for paper manufacturing amounting to over \$565,000, while German machinery to the value of \$640,000 was purchased last year.

To overcome the discrepancy between growing consumption and inadequate domestic production the Soviet launched in 1925-26 a new construction program which includes four major enterprises and which will involve an expenditure of \$70,000,000. These enterprises aim at supplying deficiencies in the major grades, to wit, news print, printing paper, cardboard and wrapping, with the necessary pulp capacities also.

Altogether the five-year plan of the Soviet paper industry calls for the construction of 28 new units. Thirteen of these are to start operations in 1929-30, eleven in 1930-31, three in 1931-32 and one in 1932-33. Of this above number, 20 are expected to be in full production in 1931-32, the remaining six in the following year. The

financial resources assigned to the paper industry in the five-year-plan involve expenditures totaling 590,000,000 rubles, or about \$295,000,000.

So far, we learn in the Review, lack of experience in building big paper mills, underestimation of the cost, difficulties in financing and delays in delivery of foreign equipment have interfered with the complete carrying out of the program on schedule.

It is of interest to note, that in addition to the expansion in paper the Soviet is to build a 30,000-ton specialty mill for the production of rayon grade pulp.

As to raw materials, Soviet Russia is no doubt conceded to have the most extensive pulp timber area in the world. While there are no cruises available that would even approximate accuracy, an idea of the magnitude is realized in trying to visualize the 2,166,000,000 acres of forest area in Russia.

"The third All-Union Conference of Engineers and Technicians of the Paper Industry," we quote from the Review, "which met in Moscow on April 24-27, 1929, showed clearly, in the nature of the work it took up, a realization of the importance of using the experience and knowledge of western European countries and America in this field. It not only approved of the importation of the latest types of machinery developed in the paper industry abroad, and of the engaging of skilled foreign technicians, but also made provision for sending many of its members abroad."

As a specific example of this policy, it is of particular interest to the Pacific Coast to note that Hardy S. Ferguson, one of America's premier pulp and paper engineers, and builder of two Pacific Coast mills, sailed for the land of the Soviet late in March to take charge of the building of one of Russia's new mills.

While, of course, the immediate intent of the Soviet is to make domestic production equivalent to consumption, there is specific evidence that, this accomplished, the Soviet will look seriously to the export field. It is already sending some pulpwood to the United States. With the tremendous forest behind it, the physical capacity to enter the export field cannot be questioned. The engineering and business ability remains to be demonstrated.

Crown Zellerbach Redeems Preferred

All outstanding shares of the convertible preferred stock of Crown Zellerbach Corporation, of the issues of 1926 and 1927, have been called for redemption on September 1, 1930, according to a notice mailed to stockholders of these issues. The stock will be called at \$120 per share plus accrued dividends.

This action in no way affects the issues of Series "A" and "B" preference stock now outstanding.

PACIFIC COAST PULP IMPORTS — JANUARY, 1930

	Pulpwood		Mechanically Ground Pulp		Bleached Sulphite		Unbleached Sulphite		Unbleached Sulphate	
	Dollars	Cords	Dollars	Tons	Dollars	Tons	Dollars	Tons	Dollars	Tons
To LOS ANGELES—										
From Sweden	-----	-----	-----	-----	-----	-----	39,116	772	19,931	500
To SAN FRANCISCO—										
From Sweden	-----	-----	-----	-----	-----	-----	41,972	900	-----	-----
From Canada	-----	-----	-----	-----	-----	-----	3,434	70	2,768	97
From Finland	-----	-----	-----	-----	-----	-----	-----	-----	37,479	800
To WASHINGTON—										
From Canada	4,753	686	2,441	75	7,351	102	6,028	128	-----	-----
Pacific Coast Totals	4,753,686	686	2,441	75	7,351	102	90,550	1,870	60,178	1,397

Total Imports of Pulpwood, Pulp, and Paper Base Stocks, January, 1930—\$356,549.

Paper Base Stocks Imported into Pacific Coast Customs Districts during January, 1930, were as follows: To Los Angeles from Austria, \$348; from Belgium, \$23,848; from France, \$10,090; from Japan, \$43,227; To San Francisco, from Germany, \$13,674; From United Kingdom, \$740; from China, \$3,100; from Japan, \$89,537; from Philippines, \$250; from Australia, \$1,375. To Oregon, from Germany, \$302; to Washington from Canada, \$2,785.

PULP

PERKINS-GOODWIN CO.
Established 1846
551 FIFTH AVENUE, NEW YORK
TEL. VANDERBILT 2800

PAPER

When writing to PERKINS GOODWIN Co. please mention PACIFIC PULP & PAPER INDUSTRY

New Paper Plant Under Construction in Argentina

A plant for the manufacture of paper using wheat and linseed straw as a raw material will be erected near Rosario, Argentina, soon. The new company will be known as the Celulos Argentina Co. The mill's initial output will be 8,000 metric tons annually.

Forest Taxation Inquiry Reports Findings

A progress report of the Forest Taxation Inquiry, recently issued by the U. S. Department of Agriculture, Forest Service, is of particular interest to those who feel that the complaints of undue tax burden on forest land are justified, as this report affords a comprehensive analysis of "Assessment Ratios of Rural Real Estates in Oregon and Washington."

The report, augmented by valuable statistical charts and graphs, was prepared under the direction of Fred Rogers Fairchild, and may be procured from the Department of Agriculture, Washington, D. C.

Kraft Odor Draws Letter

Complaint from some Tacoma citizens against the Union Bag & Paper Power Corporation charging that the company was not doing all in its power to control the characteristic gases accompanying the manufacture of kraft pulp in its 120-ton pulp mill, last month drew a formal reply from the company's resident manager, W. W. Griffith.

In his letter Mr. Griffith stated that the company had employed every known device for controlling the gases and was constantly carrying on research on the problem, but despite all these efforts there were times when circumstances of plant and atmospheric conditions combined to create some odor.

He called attention to the fact that devices for controlling the gases in the Tacoma mill were perhaps more advanced than those employed by any other kraft mills because of the considerable study the company had given to the problem. Mr. Griffith invited comparisons with other kraft mills.

Mr. Griffith reiterated the desire of the company to solve the problem completely and asked open-minded consideration in view of the company's sincere efforts. At the same time he called attention to the fact that building of the Union Bag mill at Tacoma had resulted to the general good of the city in providing a new payroll, stating that total disbursements of the company in Tacoma in 1929 had amounted to \$1,363,000.

The Paper and Pulp Industry in February, 1930

According to identical mill reports to the American Paper and Pulp Association from members and cooperating organizations, paper production in February showed a decrease of 8% under January, 1930, and an increase of 1% over February, 1929. Pulp production in February registered a decrease of 5% under January, 1930, and an increase of 6% over February, 1929.

The February production of paperboard, wrapping, bag and building papers registered a decrease under February, 1929 output. Uncoated book paper production showed an increase of 11%, newsprint 8%, writing 4%, and tissue paper 3%. Production of wrapping paper, bag paper, and paperboard decreased in February, 1930, as compared with February, 1929. Shipments in February, 1930, of uncoated book paper and hanging paper, increased over February, 1929, while newsprint, paperboard, wrapping, bag, writing, tissue, and building papers decreased.

Paperboard, wrapping and building papers registered

decreases in inventory at the end of February, 1930, as compared with the end of January, 1930. As compared with February, 1929, inventory, newsprint, wrapping, bag, and tissue papers showed decreases. The total stocks on hand for all grades was 2% below January, 1930, and 1% below that of February, 1929.

Identical pulp mill reports for February, 1930, indicated that during February, 1930, 11% more mitscherlich sulphite pulp, 9% more kraft pulp and 8% more bleached sulphite pulp was consumed by reporting mills than in February, 1929. The total shipments to outside markets of all grades of pulp in February, 1930, were 1% above the total for February, 1929.

Bleached sulphite and easy bleaching sulphite pulps were the only grades that showed decreases in inventory at the end of February as compared with the end of January, 1930. As compared with February, 1929, groundwood, news grade sulphite, mitscherlich sulphite and soda pulps registered decreases in inventory.

REPORT OF PAPER OPERATIONS IN IDENTICAL MILLS FOR THE MONTH OF FEBRUARY, 1930

GRADE	Production Tons	Shipments Tons	Stock on Hand End of Month— Tons
Newsprint	112,394	110,714	20,552
Book (Uncoated)	86,277	85,524	45,974
Paperboard	203,499	205,122	62,665
Wrapping	44,019	44,898	46,212
Bag	14,132	13,325	7,008
Writing	31,336	30,686	44,308
Tissue	12,105	12,060	8,551
Hanging	5,339	5,193	3,543
Felts and Building	4,895	5,325	3,832
Other Grades	24,241	29,171	14,009
Total—All Grades	538,237	542,018	256,654

REPORT OF WOOD PULP OPERATIONS IN IDENTICAL MILLS FOR THE MONTH OF FEBRUARY, 1930

GRADE	Production Tons	Used During Month—Tons	Shipped During Month—Tons	Stocks on Hand End of Month— Tons
Groundwood	88,984	82,579	2,824	46,290
Sulphite News Grade	37,335	33,357	3,825	6,400
Sulphite Bleached	25,557	23,523	2,521	2,984
Sulphite Easy Bleaching	3,042	2,712	373	1,057
Sulphite Mitscherlich	7,260	6,035	1,100	968
Kraft Pulp	30,113	26,067	3,405	7,019
Soda Pulp	22,732	14,936	7,624	3,624
Pulp—Other Grades	66	41	28
Total—All Grades	215,089	189,209	21,713	68,370

Printing Paper Rolls

The Cameron Machine Co. of Brooklyn, N. Y., has issued another of its interesting folders. This time it is "Printing Paper Rolls". The folder is most interestingly illustrated to show what happens in the course of ordinary abuse to good and to bad rolls.

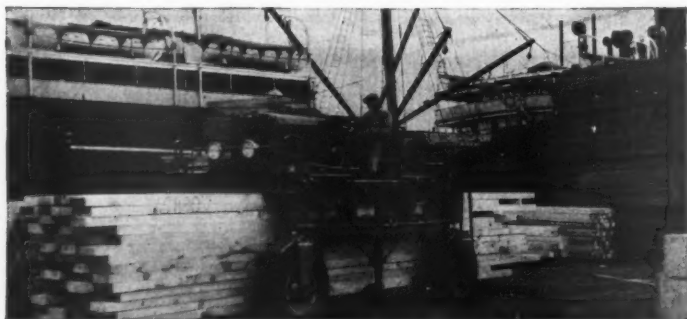
The roll has qualities apart from the paper itself, Cameron points out, some of which are: ability to feed evenly and smoothly at top speed of press; no cracks or splits in edge of sheet; greatest possible length and weight of paper per diameter of roll; freedom from web breaks; ability to unwind smoothly and at high speed clean to the core.

"Shell Mill Lubricants?"

... we have plenty of chance to test them.
They're good or we'd not be using them!"



AN ORDINARY DAY'S ACTIVITY AT THE LARGE
BLOEDEL-DONOVAN PLANT, BELLINGHAM
SS "Mishima Maru" of Nippon Yusen Kaisha—loading for the Orient
SS "Julia Luckenback" of Luckenback S. S. Co.—loading for East Coast
of U. S. and Canada
SS "Tyr" of Ocean Transport Co.—loading for Europe
SS "Makua" of Matson Navigation Company—loading for Hawaiian Islands



Willamette lumber carrier—one of the eight such at the
Bloedel-Donovan Mill. It is carrying 5880' B. M. in this load

... said John McMahon,
the Superintendent
at Bloedel-Donovan's

BACK in 1906, some 24 years ago, a good natured Irish lad started working for Bloedel-Donovan Lumber Mills in Bellingham. He's not exactly a lad any longer, but he's still Irish, still good natured and forty years smarter. John McMahon, now Superintendent of Mill Operations of Bloedel-Donovan, is a shrewd manager. You can be sure that he doesn't buy Shell oils and greases for any other reason than their high quality.

His firm operates mills at Larson and Bellingham, has one of the largest box factories on the Coast, and is noted for its huge rail and off-shore business in lumber. Shell is proud to have such a customer.

SHELL MILL LUBRICANTS

When writing SHELL OIL CO., please mention PACIFIC PULP AND PAPER INDUSTRY

Nitrocellulose Lacquer Booklet Issued

A large field outside the automobile industry awaits development in the use of nitrocellulose lacquer, according to a new booklet "The Story of Modern Lacquer" just issued by the Cellulose Products Department of Hercules Powder Co.

New uses for nitrocellulose lacquer and new applications for known uses are constantly being developed by

industrialists. Although it does not manufacture finished materials, the Hercules company, as producers of the nitrocellulose ingredients of lacquers, celluloids, and solutions, is interested in seeing these new uses developed, it is stated. Nitrocellulose is made from cellulose and nitric acid. It is in such new fields as this of lacquer, for instance, that far-seeing pulp manufacturers are looking to market their output of tomorrow.

PACIFIC COAST PAPER EXPORTS—FEBRUARY, 1930

	Newsprint		Printing		Writing		Greaseproof		Wrapping		Tissue	
	Pounds	Dollars	Pounds	Dollars	Pounds	Dollars	Pounds	Dollars	Pounds	Dollars	Pounds	Dollars
From LOS ANGELES—												
To Mexico	564	65	240	40	806	219	1,000	175	11,292	1,050	2,743	344
To Europe							87	17				
To Other Orient												
To Canada									2,300	233		
To Australia									25,098	1,825	6,489	430
To Philippines					784	232						
From SAN FRANCISCO—												
To Central America	335,698	4,539			22,105	1,240	864	187	48,398	2,685	710	73
To Mexico	1,200	60					200	63			172	57
To South America	27,390	923			14,898	1,075			28,404	1,903		
To China	152,865	5,452			250	140	639	207	134,400	6,300	2,900	307
To Philippines	158,215	5,664	1,680	203					93,152	4,217	14,000	1,185
To Japan							96	34	414	30	272	45
To Canada									10,952	580	151	50
To Australia					58	18			4,688	285		
To Other Orient					7	7			267	26	2,391	366
From OREGON—												
To China	37,189	1,220			62,619	3,235	2,351	269	10,322	529		
To Philippines	524,927	17,766	1,841	215	336,742	16,849	16,039	1,403	292,815	12,079		
To Australia			21,195	1,207	55,033	2,724						
To South America					41,667	2,278						
To Japan					14,477	652						
To Other Orient					11,555	551						
From WASHINGTON—												
To Canada	1,130	67	4,600	622	10,789	816	6,727	2,435	93,688	4,505	30,240	2,463
To Philippines	19,038	555	26,652	1,513								
To China			289,763	17,385								
To Australia			16,559	838	2,358	137					2,000	150
Pacific Coast Total	1,256,416	36,291	362,530	22,023	574,148	30,173	28,003	4,790	756,190	36,247	62,068	5,470

	Board		Building		Boxes & Cartons		Paper Bags		Converted Paper Products		Miscellaneous Paper & Prod.	
	Pounds	Dollars	Pounds	Dollars	Pounds	Dollars	Pounds	Dollars	Pounds	Dollars	Pounds	Dollars
From LOS ANGELES—												
To Mexico	890	58	945	48			1,024	131	360	138	870	
To China	723	53	174,295	3,293							70	
To Australia			9,471	234								
To Philippines					388	31						
To Central America									784	232		
From SAN FRANCISCO—												
To Australia	328,309	10,254	56,055	2,068	2,557	453	458	30	1,335	236	9,386	
To China	30,250	911	58,500	966					450	428	354	
To Central America	40,400	1,336			13,652	1,176	15,072	1,117	272	205	114	
To Other Orient	259,442	5,763	195,885	8,973	75	4	600	40	250	132	928	
To South America			6,882	235			10,758	888	106	114		
To Japan			57,000	1,814	1,071	192			1,637	322	689	
To Africa			14,000	425								
To Philippines			29	10	14,600	605	18,250	1,218	576	337	289	
To Mexico									66	23	1,204	
To Europe									77	27		
To Canada											581	
From OREGON—												
To China	998,424	19,469										
To Other Orient									4	4		
To South America							3,773	299				
To Philippines							15,297	840			1,827	
To Europe											4	
From WASHINGTON—												
To Canada	102,485	2,764	262	55	314	73			1,863	644	3,031	
To China	50,005	1,500	14,416	2,850							93	
To Japan			6	9	3,559	179					11	
To Other Orient					100	40						
To Philippines					65	18			600	128		
To Australia											385	
Pacific Coast Total	1,810,928	42,308	587,746	20,980	36,381	2,771	65,232	4,563	8,380	2,970	19,836	
Total Exports of Paper and Paper Products for February, 1930—\$228,421.												
Total Exports of Paper and Paper Products for February, 1929—\$306,012.												

Washington shipped the following wood pulp during the month of February, 1930: Sulphite—To France, 171 tons, \$6,520; Netherlands, 20 tons, \$820; Mexico, 526 tons, \$22,260; China, 28 tons, \$1,230; Japan, 153 tons, \$6,678. Other wood pulp to Canada, 5 tons, \$258.

CLASSIFICATIONS—For convenience of presentation, some classifications have been combined, as follows: "printing" includes book (not coated), cover and surface coated paper; "greaseproof" includes water-proof; "tissues" includes crepe, tissue, paper towels, napkins and toilet; "board" includes boxboard, bristol, bristolboard and other paper board and strawboard; "building" includes sheathing, and other building paper; "writing" includes fancy papeteries and other writing; "converted paper products" includes envelopes, cash register rolls, index file and other office

forms; "miscellaneous" includes blotters, paper hangings, vulcanized fibre sheets, strips, rods and tubes, manufactures of vulcanized fibre and other paper products. **COUNTRIES**—Under the classification "Central America" are included all of the Central American countries and Cuba. "South America" includes only the following South American countries: Ecuador, Paraguay, Bolivia, Uruguay, and the Guianas; other South American countries are classified separately. "Orient" includes all the Asiatic countries with the exception of China and Japan, which are separately classified. New Zealand is included under "Australia."

ANOTHER MANUFACTURER IN THE PAPER INDUSTRY THAT USES SKF BEARINGS

**THE MINE AND SMELTER SUPPLY COMPANY
(MARCY MILL DIVISION)**

Equipped with the
highest priced
Bearing in the World



**MASSCO PREFERS SKF BEARINGS BECAUSE
THEY STAND THE GAFF**

IMPROVED stock and lower production costs. These are the two outstanding features to which SKF Self-Aligning Roller Bearings contribute in the above installation. It is a battery of Marcy Open End Rod Mills beating paper pulp in a large paper plant. Each one of the mills is SKF equipped.

The three units are now beating 150

tons of pulp a day, in less time than with the old method and ... a considerable saving in power. SKF Self-Aligning Roller Bearings have the brute strength for a job of this kind without sacrifice of smooth, easy operation. In addition they have a long life and freedom from constant maintenance which makes them an important investment on huge paper mill equipment.

SKF Industries of California, Inc.

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San Francisco

480 Burnside St.
Portland, Oregon

1114 South Hope St.
Los Angeles

2487

EQUIPPED WITH THE HIGHEST PRICED BEARING IN THE WORLD

Means just this

SKF
Ball and Roller Bearings

That the manufacturers whose product is illustrated above preferred to pay more for their bearings and less for servicing or replacing them. They preferred to pay a higher price in the beginning than many times this higher price in the end. And, finally, they preferred to economize by using SKF bearings because they are made to do their job, not to fit a price list.

When writing to S. K. F. INDUSTRIES, INC., please mention PACIFIC PULP AND PAPER INDUSTRY

IMPORTS OF PULP WOOD AND WOOD PULP INTO THE UNITED STATES BY COUNTRIES

FEBRUARY, 1930

Compiled by the U. S. Department of Commerce Bureau of Foreign and Domestic Commerce

(Figures Subject to Revision.)

COUNTRIES—	PULP WOOD									
	Rough				Peeled				Rosed	
	Spruce Cords	Dollars	Other Cords	Dollars	Spruce Cords	Dollars	Other Cords	Dollars	Spruce Cords	Dollars
Canada	18,941	148,542	—	—	81,821	878,569	36,320	309,912	812	8,617
Newfoundland and Labrador	—	—	—	—	1,462	17,548	—	—	—	—
Total	18,941	148,542	—	—	83,283	896,117	36,320	309,912	812	8,617

Total Pulpwood Imports for February, 1930—139,405 Cords; \$1,363,188.

COUNTRIES—	WOOD PULP											
	Mechanically Ground		Chemical Unbleached Sulphite		Chemical Bleached Sulphite		Chemical Unbleached Sulphate		Chemical Bleached Sulphate		All Other Wood Pulp	
	Tons	Dollars	Tons	Dollars	Tons	Dollars	Tons	Dollars	Tons	Dollars	Tons	Dollars
Austria	-----	-----	-----	-----	88	6,445	-----	-----	-----	-----	14	2,322
Czechoslovakia	-----	-----	75	3,477	29	1,928	-----	-----	-----	-----	-----	-----
Finland	975	26,541	12,146	630,804	62	4,300	5,078	246,641	335	21,817	-----	-----
Germany	-----	-----	1,978	107,396	6,286	450,817	-----	-----	-----	-----	81	4,491
Lithuania	-----	-----	378	20,679	-----	-----	-----	-----	-----	-----	-----	-----
Netherlands	-----	-----	-----	11	-----	-----	-----	-----	-----	-----	-----	-----
Norway	5,890	155,540	1,850	101,681	4,331	301,697	2,228	104,682	100	7,052	-----	-----
Poland and Danzig	-----	-----	142	6,422	-----	-----	238	10,744	-----	-----	-----	-----
Sweden	6,093	160,399	43,288	2,265,461	3,098	224,714	35,675	1,656,919	100	7,640	-----	-----
Switzerland	330	9,573	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Yugoslavia and Albania	-----	-----	922	43,209	-----	-----	-----	-----	-----	-----	-----	-----
Canada	21,627	614,116	15,259	758,607	18,248	1,340,519	6,881	416,782	574	52,740	161	11,939
Total	34,915	966,169	76,038	3,937,747	32,142	2,330,420	50,100	2,435,768	1,109	89,249	256	18,752
Total Imports of All Grades of Pulp for February, 1930—194,560 Tons; \$9,778,105.												

Total Imports of All Grades of Pulp for February, 1930—194,560 Tons; \$9,778,105.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912

Of Pacific Pulp & Paper Industry, published monthly—except in March, when publication is semi-monthly—at Seattle, Washington, for April 1, 1930.

State of Washington, County of King,—ss.

Before me, a Notary Public in and for the State and county aforesaid, personally appeared Lawrence K. Smith, who having been duly sworn according to law, deposes and says that he is the business manager of the Pacific Pulp & Paper Industry, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 4111, Postal Laws and Regulations, printed on the reverse of this form, to-wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher, Consolidated Publishing Co., 71 Columbia St., Seattle, Wash.
Editor, Lloyd E. Thorpe, 71 Columbia St., Seattle, Wash.
Managing editor (none).
Business manager, L. K. Smith, 71 Columbia St., Seattle, Wash.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.)

Consolidated Publishing Co., 71 Columbia St., Seattle, Wash.
Miller Freeman, Daniel E. Pratt, Lawrence K. Smith, W. E. Crosby, G. W. Cain, all of 71 Columbia St., Seattle, Wash.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in case where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds or other securities than as so stated by him.

LAWRENCE K. SMITH, Business Manager.

Sworn to and subscribed before me this 28th day of March, 1930.

(Seal)

F. E. WILLIAMS.

(My commission expires June 12, 1932.)

Production of Newsprint
March, 1930

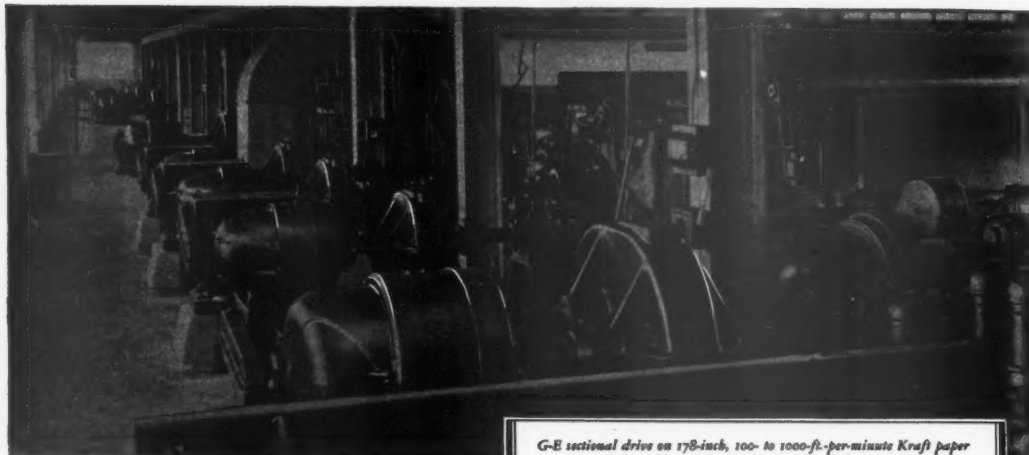
Production in Canada during March, 1930, amounted to 207,485 tons and shipments to 208,629 tons. Production in the United States was 113,328 tons and shipments 109,686 tons, making a total United States and Canadian news print production of 320,813 tons and shipments of 318,315 tons. During March, 23,579 tons of news print were made in Newfoundland and 1,642 tons in Mexico, so that the total North American production for the month amounted to 346,034 tons.

The Canadian mills produced 15,076 tons less in the first three months of 1930 than in the first three months of 1929, which was a decrease of 2 per cent. The United States output was 7,725 tons or 2 per cent more than for the first three months of 1929. Production in Newfoundland was 8,343 tons or 14 per cent more in the first three months of 1930 than in 1929 and in Mexico 100 tons less, making a total increase of 882 tons or about the same as in 1929.

During March the Canadian mills operated at 68.4 per cent of rated capacity, United States mills at 80.3 per cent and Newfoundland mills at 98.5 per cent. Stock of news print paper at Canadian mills totalled 38,661 tons at the end of March and at United States mills 24,004 tons, making a combined total of 62,665 tons, which was equivalent to 3.7 days' average production.

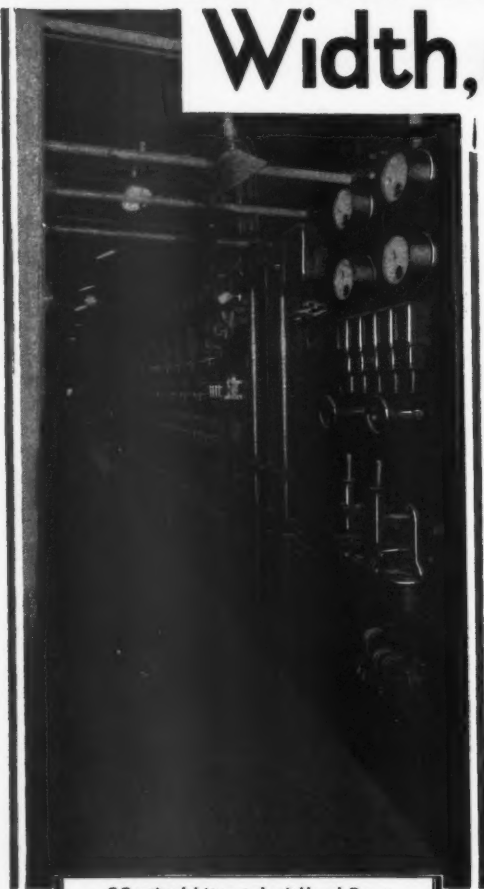
NORTH AMERICAN PRODUCTION

	Canada	United States	Newfoundland	Mexico	Total
1930—March	207,485	113,328	23,579	1,642	346,034
Three Months	603,817	349,777	67,940	4,858	1,026,392
1929—Three Months	618,893	342,052	59,607	4,958	1,025,510
1928—Three Months	573,307	353,509	54,651	3,999	985,376
1927—Three Months	487,804	388,555	51,039	3,497	930,895
1926—Three Months	429,444	415,391	40,886	3,076	888,997
1925—Three Months	363,866	371,545	15,758	3,046	754,215
1924—Three Months	336,039	370,850	16,183	2,874	725,946
1923—Three Months	298,983	371,357	15,638	3,000	688,978



G-E sectional drive on 178-inch, 100- to 1000-ft.-per-minute Kraft paper machine, Brown Paper Mill Co. Inc., Monroe, La.

G-E Sectional Drive for Speed, Width, and Speed-range



G-E sectional-drive-control switchboard, Brown Paper Mill Co. Inc.

SPEED, speed-range, width of paper, or a combination of all three—regardless of the nature of your problem in paper machine drive, you'll find the correct answer in General Electric equipment.

For example, in the plant of the Brown Paper Mill Co. Inc., Monroe, Louisiana—one of the largest manufacturers of Kraft paper in the South—two major considerations were answered by the installation of a G-E multiple-generator sectional drive: an unusual speed range of 10:1, and an output range from 300-pound Kraft to 24-pound bag.

General Electric has powered every type and size of machine for paper making from the largest—as typified by the 304-inch, 1500-ft.-per-minute paper machine of the Backus-Brooks Company—down to the smallest. If it's a problem of drive, take it up with the nearest G-E office. G-E specialists will gladly cooperate with you in the solution.

GENERAL



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237-41

SALES AND ENGINEERING SERVICE IN PRINCIPAL CITIES

When writing GENERAL ELECTRIC Co. please mention PACIFIC PULP AND PAPER INDUSTRY

International Issues First Annual Report

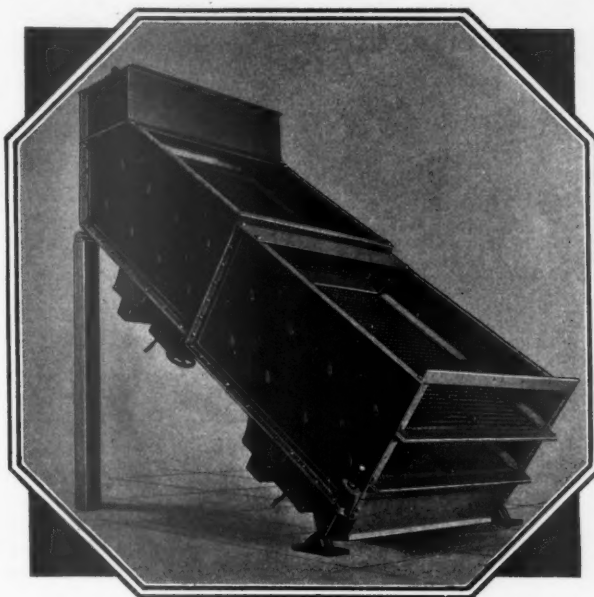
The first annual report of International Paper and Power Co. shows earnings for 1929, after all prior charges and deduction of depreciation reserves, of \$4,011,762 for the preferred and common stocks of International Paper and Power Co., substantially the same as the \$3,949,206 realized for the same stocks in 1928.

For the full year 1929 the earnings available for depreciation and for dividends on the shares of International Paper and Power Company amounted to \$13,151,264.85. Total dividend payments on the shares of the company amounted to \$8,834,511 (preferred dividends, \$6,447,651 and Class A common dividends, \$2,386,800), and depreciation to \$9,139,502.82, leaving a deficit for the year of \$4,822,748.97.

The broadened scope of power and utility operations is indicated by the fact that out of total capital assets with a book value of \$661,001,400 at December 31st, 1929, \$410,610,283 or over 62% represented power and utility properties and investments. At the present time practically two-thirds of the consolidated net earnings available for interest and reserves are being derived from power and utility operations.

During 1929, arrangements were concluded for the disposition of all newspaper investments with the exception of one group, the disposition of which is delayed by litigation.

The report is an exhaustive affair of 45 pages, containing not only the stereotyped president's message and a balance sheet, but a discussion of the affairs of the company, detailed charts and listings of the company's organization and properties, and many other points of interest concerning this mammoth organization.



Hum-mer Electric CHIP SCREEN

- Immense capacity!
- Thorough removal of sawdust and fine particles!
- Small floor space required!
- Low power consumption!
- Fully adjustable screening angle and vibration!
- No lubrication!
- No destructive shaking of supports or buildings!
- No belts or pulleys!
- Trouble-free operation!

These are the features which make the Wood Chip Hum-mer a profitable investment for pulp and paper mills!

Write for Catalogue 54-P

The W. S. Tyler Company
Cleveland, Ohio

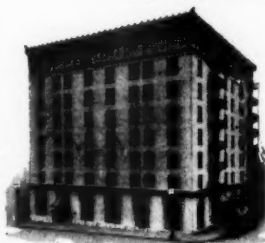
Position Wanted

Experienced paper salesman desires position with Mill or Converter or both, to assist in sales work or handle sales at mill, or in territory. Experienced in every branch of the Coarse Paper business, also experienced in Fine Paper. Desire making change soon.

Address Reply, Box 102
PACIFIC PULP & PAPER INDUSTRY
71 Columbia Street
Seattle, Wash.

The HOTEL CONGRESS

*The stopping place in Portland
for Pulp and Paper Men.*



Sixth at Main
Street
PORTLAND
OREGON

200 Rooms—200 Baths
Convenient Downtown
Location.
Reasonable Rates Prevail.

LOUIS E. BOGEL, Resident Manager

TYLER
FOURDRINIER
CYLINDER
CORDUROY
WIRES

PACIFIC PULP & PAPER INDUSTRY

SHIPMENTS OF OVERISSUE NEWSPAPER

From Pacific Coast Customs Districts—February, 1930

From Los Angeles		Pounds	Dollars
To China	4,393,280	34,559	
To Hong Kong	1,454,000	11,464	
To Japan	99,960	800	
To Philippines	570,000	6,067	
To Other Orient	503,800	3,857	
Total	7,021,040	56,729	
From San Francisco		Pounds	Dollars
To Nicaragua	40,600	530	
To China	695,800	5,297	
To Other Orient	660,040	7,068	
To Australia	2,000	26	
Total	1,398,440	12,921	
From Washington		Pounds	Dollars
To Canada	1,500	25	
Pacific Coast Total	8,420,980	69,675	

Sulphite Superintendent, 40 years of age, twenty years' experience in the manufacturing of high grade sulphite, sixteen years with present employers. Wishes mill connection on West Coast.

Address Reply: Box 101
PACIFIC PULP & PAPER INDUSTRY
71 Columbia St., Seattle, Wash.

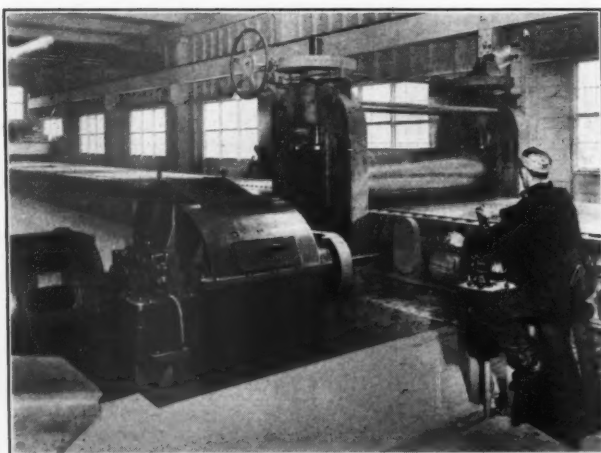
New Sulphate Mill Planned in Norway

The newly organized Norsk Sulfat Cellulose A/S, capitalized at \$670,000, is planning a new 20,000-ton sulphate pulp mill in the Glommen district, south of Oslo, where sawmill waste can be obtained in quantities. Sawmill interests are among the promoters of the project. There has been no appreciable increase in the production of sulphate pulp in Norway during the past ten years, the present output being in the neighborhood of 70,000 metric tons.

PACIFIC COAST PAPER IMPORTS

January, 1930

	Newsprint Dollars	Printing Dollars	Writing & Drawing Dollars	Wrapping Dollars	All Others Dollars
To LOS ANGELES—					
From Finland	313				
From Sweden	22,011				
From Canada	158,072				
From Europe			1,318	300	5,638
From Japan		126	11		1,351
From Other Orient		76			135
To SAN FRANCISCO—					
From Finland	1,354				
From Sweden	78,503			444	
From Canada	177,730				
From Europe		2,510	2,068		40,054
From Japan			329		1,835
From Other Orient		4	92		621
To OREGON—					
From Newfoundland	37,035				
From Japan					515
From Other Orient			3		10
From Europe					449
To WASHINGTON—					
From Canada	388,838				
From Newfoundland	71,278				
From Japan			282		7,318
From Other Orient					308
From Europe			1,237		3,293
Pacific Coast Totals	935,134	2,716	5,340	744	61,527
Total Imports of All Paper and Paper Products, January, 1930, \$1,004,717.					



"Get Your Gears
from Gear
Specialists"

The Big Drives—We Design Them Too

Two hundred and fifty horsepower with speed reduction to 10 and 15 R.P.M.—this information is included on the nameplate of the WESTERN double reduction drive, which has proved so successful in the plant of the Northwest Lead Co. in Seattle. Though they may not be directly concerned with big two speed drives such as this, mill superintendents and operators will appreciate the special conditions and the ability of Western engineers to design for any problems.

Whether standard or special, single or double reduction Herringbone drives, right angle reducers or worm gear units, our facilities in two plants are readily at hand for the speedy solution of any problem in the positive transmission of power. Call our nearest office.

Western Gear Works

SEATTLE, WASH.

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